SEEING AMERICA

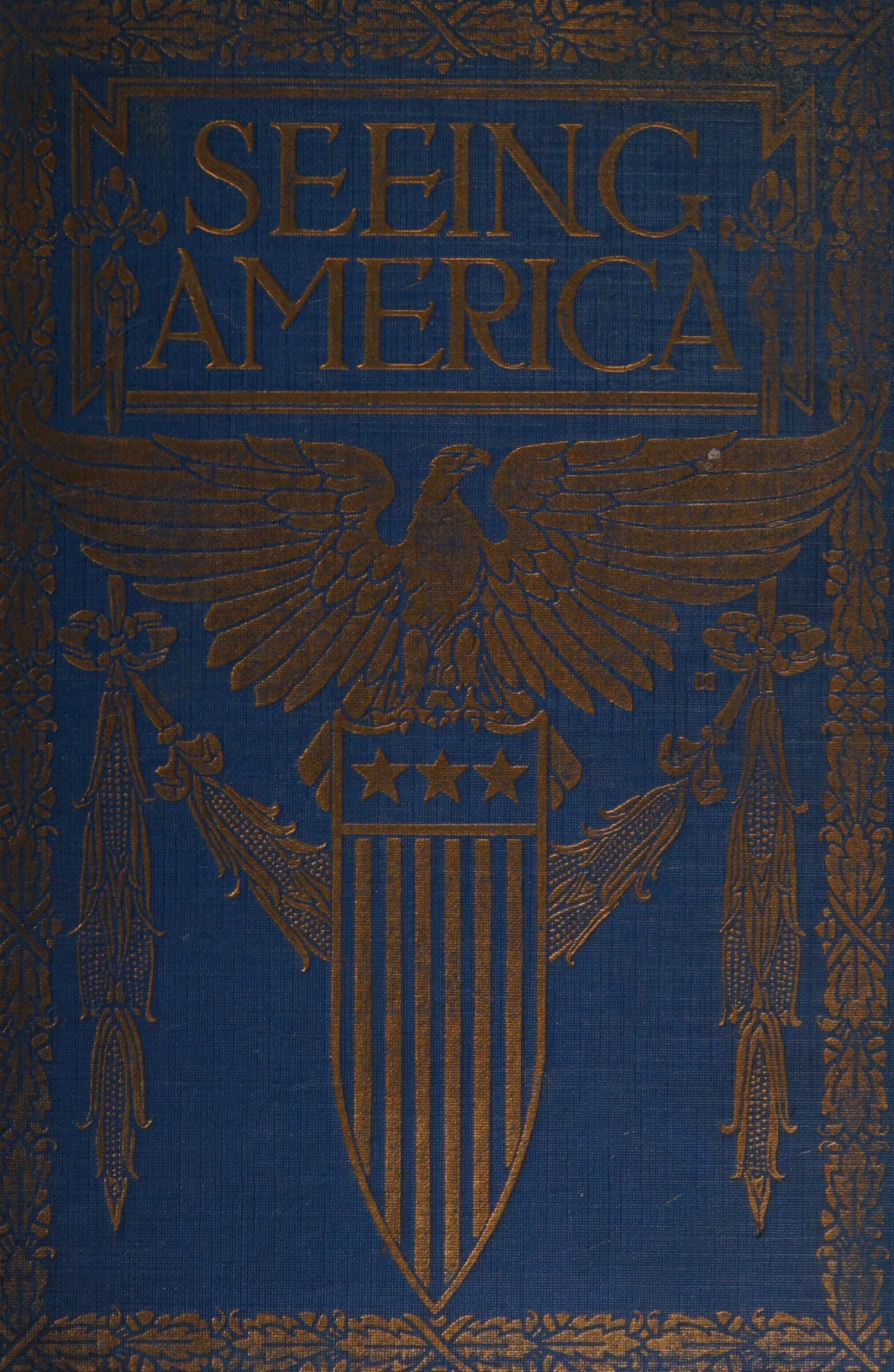

Photo by Brown Bros.

A Fairyland of Light. The canyon of lower Broadway, south from the Woolworth Building—a glorious miracle of light.

SEEING AMERICA

INCLUDING THE PANAMA EXPOSITIONS

A DESCRIPTIVE AND PICTURESQUE JOURNEY THROUGH ROMANTIC AND HISTORIC CITIES AND PLACES, NATURAL WONDERS, SCENIC MARVELS OF NATIONAL PRIDE AND INTEREST

By LOGAN MARSHALL
Author of "The Story of the Panama Canal," "Myths and Legends of All Nations," etc.

Illustrated

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INTRODUCTION

THERE IS magic in the word "travel": it kindles something deep and primordial within us and makes us rise to welcome the man who has been afar as we would to greet a royal guest. We will travel if we can, and if not, then at least we will listen to the strange and splendid experiences of those who do.

Throughout the ages it has been so. The men who went down to the sea in ships were the most honored and the most envied among all early peoples, and the wandering singer was received with joy, not so much for his music as because he brought news from afar, fascinating stories of distant, unknown countries to which few of those who listened could ever hope to go.

Traveling has become less and less difficult, of course, and in this twentieth century of steam and steel is quite within the limits of the possible even for the average man; and the tourist is known throughout the length and breadth of the land, looked upon with something akin to awe in the small towns of the East, and regarded with mild amusement in the West where one sometimes journeys several hundred miles to spend the day with a friend.

Yet, though we Americans are a nation of travelers, few of us, except through necessity, spend much time or effort in seeing America. That is "home" and accordingly discounted. England, France, Italy, Japan, China, lure us with the charm of the far-away, blind us to the

truth that it is not the distant that is always most enchanting, but the picturesque or the magnificent, wherever it may be. Americans travel all over the world and find no city so wonderful as New York with its canyon streets and seething masses gathered together from every nation; they visit Asia to study forgotten civilizations when Redskins still live on the Western plains and cliff dwellings reveal strange stories of the past; they take long pilgrimages to the Alps and the Himalayas while the most stupendous sculpture of Nature is unveiled in the valley of the Colorado. Perhaps some day, when Europe like America shall have become a nation of travelers and sung for us the praises of American cities and resorts and great scenic playgrounds, we as a nation shall begin to realize their importance.

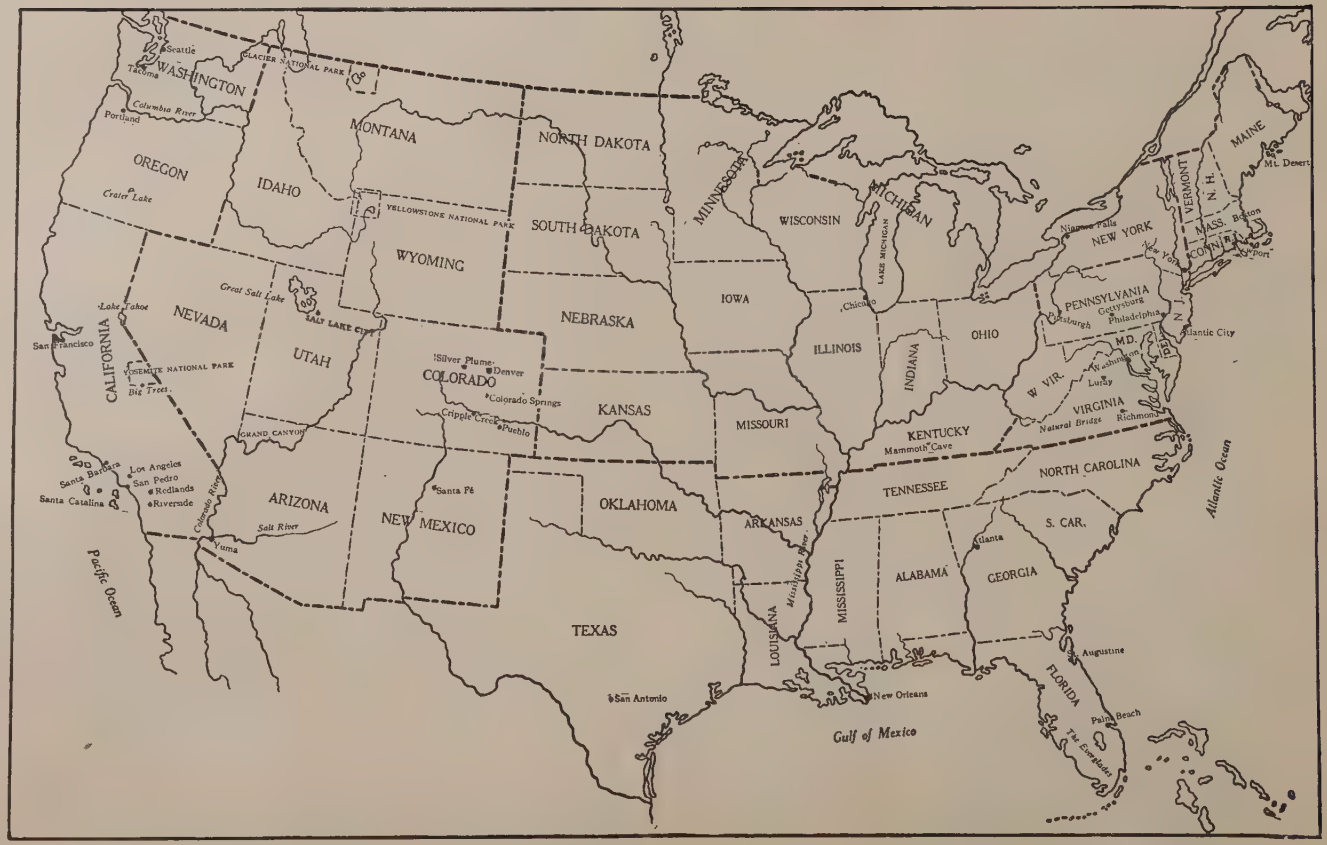
Here and there, it is true, we find men and women who have journeyed from Land's End to Golden Gate and found America good. They are enthusiastic people always, with a fine flavor of patriotism about them and a quiet inner satisfaction at having discovered within their own country such abundant resources for their refreshment and inspiration. It is to these especially that this book will appeal, recalling by word and picture many hours of never-to-be-forgotten pleasure.

It will appeal also to those—and they are an ever-increasing number—who would travel if they could, and who long to know more about the places of which they have heard. The author, who has been in the position both of those who long to go and of those who have been, has endeavored to clear up the hazy mental pictures of the former, making their day-dreams more real and abiding, and to revivify the memories of the

latter. After all, "home-keeping youths" need not have "homely wits," for one may read of the Great Plains and breathe their spirit even while one stays quietly at home going the daily round of office and shop.

The author has been fortunate enough to have lived in both East and West and to have caught something of the viewpoint of both. In the final analysis, it is the whole of America that we love, North and South, East and West.

"Lo! body and soul!—this land!
Mighty Manhattan, with spires, and
The sparkling and hurrying tides, and the ships;
The varied and ample land,—the South
And the North in the light—Ohio's shores, and flashing Missouri,
And ever the far-spreading prairies, covered with grass and corn."



MAP OF THE UNITED STATES SHOWING SOME OF THE PLACES VISITED BY ALL GOOD "SEEING AMERICA" PILGRIMS

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TOWERS OF THE MODERN BABEL.

Municipal Woolworth Western Union Hudson Terminal Singer Manhattan Investing Equitable Bankers' Trust Express

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THE GATEWAY TO AMERICA. The famous statue of Liberty in New York Harbor. The grassy space in the foreground is Battery Park, so called because it was fortified in the seventeenth century for the protection of the town, and the round building is the Aquarium. Here in the early days stood a rude "castle" or fort, later supplanted by an opera house. Washington often walked in the old garden around the building, as did other great Americans.

Photo by Brown Bros.

"The Great White Way." Times Square, New York, at night, with Broadway on the left, a curving ribbon of white light. Here every night in winter thousands upon thousands of people throng to theaters and cafés.

Photo by Brown Bros.

THE GREAT CONNECTING LINK BETWEEN TWO GREAT BOROUGHS. The famous Brooklyn Bridge over the East River, connecting Manhattan and Brooklyn. The building of this bridge was begun in 1870 and completed in 1883.

CHAPTER I

MODERN TOWERS OF BABEL

NEW YORK, THE CITY OF CITIES—THE MECCA OF AMERICANS—MAMMOTH SKYSCRAPERS—COMMERCE ENCIRCLING THE SEVEN SEAS—THE GATHERING GROUND OF MANY PEOPLES—HISTORIC PLACES—THE GREAT WHITE WAY—WALL STREET—RIVERSIDE DRIVE—A PEOPLE'S UNIVERSITY—THE AMERICAN RHINE—WEST POINT

IT IS IMPOSSIBLE to think of New York without superlatives. It is the largest city on the globe; it is the greatest industrial city; it contains the loftiest buildings; its towers and bridges and tunnels are the wonder of the world. And with every chance of becoming the most sordid city, it is still a place of miracled enchantment, its towers resplendent, its commercialism transmuted into glory by the very might of the imagination which can conceive and build its Babel not through fear but through audacity and a certain longing that is truly American to do things in big ways—bigger than they have ever been done before.

"For the builders builded in blindness;
Little they thought of the ultimate
Uses of beauty!
Little they kenned and nothing they recked of the raptures
Of conscious and masterful art;
They builded blinder than they who raised
The naively blasphemous challenge of Babel;
For they wrought in the sordid humor

Of greed, and the lust for power;
They wrought in the heat of the bitter
Battle for gold;
And some of them ground men's lives to mortar,
Taking the conqueror's toll
From the veins of the driven millions;
Of curses and tears they builded,
Cruelty and crime and sorrow—
And behold! by a baffling magic
The work of their hands transmuted
To temples and towers that are crowned
With a glamor transcendent
That lifts up the heart like the smile of a god!"*

THE MECCA OF AMERICANS

Hither Americans from far and near delight to come, as the Englishman delights to journey to London or the Frenchman to Paris, to bathe for a time in the great rushing stream of human life, and return with fresh vigor, new ideas, larger vision. To the average American a trip to Manhattan is a sort of mental and spiritual Turkish bath: he can scarcely escape becoming a little less provincial, a little more alive. The artist translates New York in terms of beauty; the practical man, in terms of efficiency. New York is indeed all things to all men, and the New York of the artist is as different from the New York of the efficiency expert as the New York of the immigrant is from the New York of the millionaires who build their palaces on Fifth Avenue. Everywhere, however, it is spectacular, the big setting of a big drama, a place of endless experiment and achievement, the city of the skyscraper, whose elevators convey one with the

* Don Marquis in Scribner's Magazine.

speed of an eagle to dizzy summits from which those who walk the narrow street below seem like so many ants, following their daily toil.

MAMMOTH SKYSCRAPERS

For the present at least the tallest office building in the world will be found on the western side of City Hall Park, where the towering Woolworth Building lifts its glittering steel-and-terra-cotta structure through a sheer height of 785 feet above the sidewalk. Like a majestic cathedral it rises out of the old and ugly buildings that have gathered around the water front. This is not only the loftiest office building, but, if we except the Eiffel tower, it is the tallest structure of any kind as yet erected by man.

As the eye ranges up through the multitudinous stories to the pyramidal structure at the top, the question arises as to what is the limit of height to which a habitable building can be carried. The answer is to be found in a certain restriction laid down by the Building Code of New York City, which states that on a rock foundation the load may reach but not exceed fifteen tons to the square foot. On this basis, it would be possible on a plot of ground 200 feet square to erect an office building 2,000 feet in height, and to build it, moreover, so that it would be perfectly secure against the fiercest hurricane, and, because of its elasticity, even against the altogether improbable event of an earthquake shock. This is, indeed, the age of miracles.

The Woolworth Building is taller than it looks. To reach its lowest foundation, we must go down in one place a depth of 120 feet beneath the sidewalk—for

that was the depth to which it was necessary to sink the pneumatic caisson in that particular spot before the solid rock of Manhattan Island was reached. This would make the total height from lowest foundation to summit 905 feet. The building contains 23,000 tons of structural steel, 17,000,000 common brick, 7,500 tons of terra cotta, 1,800,000 square feet of floor tiles, 1,800,000 square feet of partition tiles, and 2,500 square feet of cut stone. From these figures we gain some idea of what the erection of this $12,000,000 structure meant.

We have said that the Woolworth Building was the loftiest in the world; it was once also the largest, but such statements do not long remain true in a city that moves as New York moves, and the great Equitable Building soon eclipsed the Woolworth in size if not in height. The Singer Building, which once stood out the glorious sentinel of lower New York, is now only one of many that make the skyline so daringly picturesque.

COMMERCE ENCIRCLING THE SEVEN SEAS

It was to New York's splendid position as a seaport that the early growth of the city was due, and it is that same position which makes it the peer of American cities today. New York's share of the total foreign commerce of the United States was 46 per cent in 1914, the domestic exports amounting to no less than $845,000,000. The shrewd Dutch settlers of the little old town of New Amsterdam could never have imagined such wealth.

Ships of a hundred different lines ply to and from the great piers that line the rivers, carrying their cargoes and millions of passengers to and from ports all over the

Photo by Brown Bros.

WALL STREET, KNOWN AROUND THE WORLD. This narrow canyon street in the lower part of the borough of Manhattan is the financial center of the United States. Trinity Church (founded in 1696 and rebuilt in 1839) with its quaint old churchyard lies at the head of the street on Broadway, its spire insignificant amid the giant skyscrapers that surround it.

Photo by Brown Bros.

GRANT'S TOMB ON THE HUDSON. It was Grant's own wish that his body should rest in New York, where his last years were spent, and the memorial on Riverside Drive is a fitting burial place. His own immortal phrase, "Let us have peace," is carved above the portico.

globe, for New York is indeed a great cosmopolis, to which products and peoples inevitably are directed.

THE GATHERING GROUND OF MANY PEOPLES

Here all countries are represented, and the East Side especially is a vast melting pot where Italians, Lithuanians, Russians, Bulgarians, Rumanians, Greeks, Poles and Hungarians—Americans-in-the-making—congregate. Many-storied tenements stand in unabashed disorder, clothes and bedding ornamenting the front fire-escapes, and pushcarts lining the streets where children throng to play and women in kerchiefs and shawls chatter and buy. Chinatown, also, must not be forgotten, with its fascinating shops and inhabitants of a nation which possessed both culture and religion many thousand years before America was born. In other quarters are found other Orientals—Arabs, Armenians, Turks and Syrians—weaving their gorgeous fabrics and selling them to him who will buy. Japanese stores there are also, German gardens, and a quaint French quarter—all within this most American of American cities. It is said that there are in New York City more Germans than in any German city and more Irish than in Dublin.

HISTORIC PLACES

Places of historic interest there are, too—Battery Park, once the famous Castle Garden; Fraunces' Tavern, Broad and Pearl streets, where Washington took leave of his officers in 1783; Jumel Mansion, 160th Street and Amsterdam Avenue, the headquarters of Washington and also of Sir Henry Clinton; St. Paul's Chapel, Broadway and Vesey Street, built in 1766 and still

preserved with Washington's and Governor Clinton's pews, monuments and relics intact—a constant reminder amid all the bustle of the downtown district of the early days, now long since gone by. Near by is also Trinity Church (established in 1697), just at the head of Wall Street, a curious anomaly, though united to that money center by its wealthy church society, the wealthiest in America, and by the names of some of the distinguished dead whose remains lie in the sleepy old churchyard of worn gravestones and naive inscriptions; and in Wall Street at the corner of Nassau is the United States Sub-Treasury, on the site of Federal Hall in which assembled the first American Congress and where Washington took the first oath of office. A statue of the great chief stands in front of the building.

WALL STREET

Here in Wall Street is the financial center not only of New York but of the whole nation. The New York Stock Exchange at Broad Street is the world's greatest market of stocks, bonds and securities; and in the Sub-Treasury deposits sometimes reach a total of $225,000,000. At the Produce Exchange in Whitehall Street three thousand members transact annually business amounting to over a billion dollars.

THE GREAT WHITE WAY

Wall Street is plainly "down town." The retail business of the city has moved steadily north, following Broadway, until the center of the shopping district is now, roughly, Thirty-fourth Street. The theaters are pretty well scattered throughout the city, but tend to

concentrate at Forty-second Street and Broadway and it is in this neighborhood perhaps that the "Great White Way" is most resplendent. To walk Broadway after the theaters have disgorged on Saturday evening is to enter a romantic land where night is not and gayety is unceasing. Electric signs dazzle on every hand and men and women good-naturedly jostle each other in the stream that washes the sidewalks. Overhead, in a blaze of light, a huge eagle with a fluttering ribbon caught in his beak flaps his nightly journey toward a five-foot bottle of beer, a kitten tangles and untangles herself in a spool of well-known silk, and a huge name of cigarette fame lends its luster to the dazzling highway. From a tall building, Broadway seems a long curving ribbon of white light.

RIVERSIDE DRIVE

If Broadway is the people's street, Fifth Avenue is the parade ground of the wealthy. Here are the fashionable shops and here in the afternoon smartly dressed men and women love to saunter as well as shop. Up and down the sidewalks they surge while the street is black with automobiles and omnibuses wriggling in and out between one another and dodging the crowds. Most New Yorkers enjoy these busses and few visitors miss riding in them, viewing from a comfortable seat on the open top the great stores of lower Fifth Avenue and the homes of the Astors and other millionaires farther up. From Fortieth to Forty-second Street, one passes on the left the Public Library, a splendid classic building containing over a million volumes, and on the right at Fifty-second Street St. Patrick's Cathedral, the largest and most beautiful

Gothic church in America. At Fifty-ninth Street one strikes Central Park, 879 acres of diversified woodland, meadow, lawns and ponds, containing the Metropolitan Museum of Art, the finest of its kind in America, with many works of modern artists as well as of the old masters.

RIVERSIDE DRIVE

Some of the omnibuses follow Riverside Drive all the way to Grant's Tomb at 123d Street, and a beautiful ride it is, with stately houses fronting on the Hudson and a fitting monument to one of the nation's great men at the end. Stately and beautiful the mausoleum stands upon a grassy terrace where its white marble can be seen far up and down the river. Over the entrance are inscribed the immortal words of the beloved soldier: "Let us have peace."

A PEOPLE'S UNIVERSITY

Not far away, on Morningside Heights, is the campus of Columbia University, originally called King's College, and after the Revolution Columbia College, which offers the students of the city courses such as may be found in no other university this side the sea. Perhaps the most interesting of the buildings here is the Library, one of the most beautiful buildings in America, containing 530,000 bound volumes. Around the Library are grouped the University buildings, including Barnard College for women and Teachers college which became parts of the University's educational system in 1900 and 1904.

Columbia offers many different courses, including Medicine, Law, Mines and Engineering. The School of Journalism, endowed by Joseph Pulitzer, that strange

Photo by Brown Bros.

COLUMBIA UNIVERSITY ON MORNINGSIDE HEIGHTS. A bird's-eye view of the campus showing the University Library with its dome and pillars, one of the most beautiful buildings in America. Situated in New York City, Columbia has become the Mecca of students from all parts of the country.

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In the Land of Hendrick Hudson. At the upper end of the parade ground of the United States Military Academy at West Point, New York, looking north up the Hudson River toward Newburg. This stream has played a large part in American history, offering in colonial times through Lake Champlain and the Richelieu River a comparatively easy route to Canada.

and interesting dean of American newspapers, was opened here in 1912. Those who cannot attend the regular courses are offered opportunities in the Summer School and in the system of extension teaching, whereby courses of lectures are given throughout the city.

THE AMERICAN RHINE

But the call of the water is in our blood, for we have caught fascinating glimpses of the upper Hudson River and long to follow its course. To be sure it does not possess the ruined castles and quaint old towns that lend charm to the Rhine, but the scenery is at all times lovely and sometimes impressively grand. "The Danube has in part glimpses of such grandeur," said George William Curtis, "the Elbe sometimes has such delicately penciled effects, but no European river is so lordly in its bearing, none flows in such state to the sea." And if the Rhine has its legendary wealth, the Hudson has its Sleepy Hollow and Rip Van Winkle, immortalized by Washington Irving whose "Sunnyside" home is still one of the lovely landmarks of this fascinating stream, and is associated too with the undying romances of James Fenimore Cooper.

In ascending the Hudson from New York, there are passed on either hand the heights which were covered in early Revolutionary days with the defenses of New York, Fort Washington and Fort Lee, but beyond the names no trace of either fort remains. The British captured both in the latter part of 1776, and afterwards held them. Fort Lee is now a favorite picnic ground. Above it rises the great wall of the Palisades, the wonderful formation built up of columned trap rock that

extends along the western river bank for twenty miles up to Piermont, this rocky buttress making the northern limit of New Jersey on the Hudson River. To the eastward, the opposite shore of the Hudson is a succession of villas and fashionable summer resorts, whither the New York people come out, seeking rest.

WEST POINT

The most famous locality in the Highlands is West Point. "In this beautiful place," wrote Charles Dickens, "the fairest among the fair and lovely Highlands of the North River; shut in by deep green heights and ruined forts, and looking down upon the distant town of Newburg, along a glittering path of sunlit water, with here and there a skiff, whose white sail often bends on some new tack as sudden flaws of wind come down upon her from the gullies in the hills, hemmed in besides, all around, with memories of Washington and events of the Revolutionary War, is the military school of America." Opposite Anthony's Nose, Montgomery Creek flows in, its mouth broadened into a little bay. Upon the high rocks at the entrance, on either side, stood the great defenders of the lower Highlands during the early Revolution, Forts Clinton and Montgomery, considered impregnable then, and to bar the river passage a ponderous iron chain on timber floats was stretched across the channel to Anthony's Nose.

The Hudson River, some distance above, bends sharply around the little lighthouse on the end of West Point, its extremity being a moderately sloping rock covered with cedars, the reef going deep down into the water, while on its highest part is a monument to General

Kosciusko, who had much to do with constructing the original military works. The flat and elevated surface, some distance inland, plainly visible both from up and down the river, is the Parade Ground, the Academic buildings being constructed around it, while behind them on higher ground is the dome-crowned library. The surface of West Point is not so high as the surrounding mountains, but its advanced position completely commands the river approach both ways, and hence its military importance. Along the water's edge at the Point the rocks are worn smooth, it is said, by so many cadets sitting there in the summer time. Just above is the cove, where they swim and practice, at pontoon-bridge building, and back of this cover is the artillery ground, the guns being fired at the huge side of Old Cro' Nest Mountain to the northward.

THE CATSKILL MOUNTAINS

Still farther north one comes into the fascinating region where the Catskill Mountains rise in all their glory, spreading across the western horizon at a distance of eight to ten miles from the Hudson River. They stretch for about fifteen miles, and the range covers some five hundred square miles. The most prominent peaks in the view are Round Top and the High Peak, rising thirty-four hundred and thirty-six hundred feet. The Indians knew these grand peaks as the Onti Ora, or "Mountains of the Sky," thus named because in some conditions of the atmosphere they appear like a heavy cumulus cloud hanging above the horizon. The weird Indian tradition was that among these mountains was held the treasury of storms and sunshine for the Hudson,

presided over by the spirit of an old Indian squaw who dwelt within the range.

It was among these wonderful mountains that Washington Irving was thus enabled to discover Rip Van Winkle. Down on the mountain side, upon the margin of a deep dark glen leading up from Catskill Village, stands Rip Van Winkle's ancient little cabin. It is within the vast amphitheater where Hendrick Hudson's ghostly crew held their revels and beguiled him to drink from the flagon which put him into his sleep of twenty years.

Among these mountains one would like to linger long enough at least to hear the Dutch ship's company from the "Half Moon" playing their game of nine-pins, but sightseeing days are short when there's the whole of America to be visited, and one must return to the vast city where Irving in his busy years found a home, and where Cooper, too, wrote many of his Leatherstocking tales.

The New York of their day has long since passed away, as the present city whose towers spell arrogance will perhaps some day also pass.

"And we who builded this citadel in fabric of brick and brass
Shall build again for the city's Soul and the things that will not pass.
In Babel the tongues were all confused; but that ancient curse is done.
And here have the scattered tribes of earth fore-gathered again as one.
Out of all lands we lift our hands to build with steam and fire;
And towering vast we shall raise at last the City of Man's Desire."*

For the present New York satisfies many of our twentieth-century desires, and if the New York of Fifth

* C. L. Edson in the Evening Mail.

Avenue and the towering skyscrapers is also the New York of police graft and Tammany and righteous industrial unrest, it is still a city not without ideals, a city that in many ways has demonstrated the value both of efficiency and of imagination.

CHAPTER II

IDEAS AND IDEALS

BOSTON, THE ANCIENT HUB—OUR DECOROUS NEW ENGLAND SISTER — FUNDAMENTAL IDEALS — SACRED AMERICAN RELICS—THE CRADLE OF LIBERTY—BOSTON COMMON—THE PUBLIC LIBRARY—ART AND MUSIC—"THE MOTHER CHURCH"—BRAVE OLD HARVARD—BOSTON HARBOR.

NEW ENGLAND is a place of historic memories and it is around Boston, "the hub of the universe," that they center. Prior to the Revolution, indeed, Boston was the largest and most important American city, reaching a population of 25,000 inhabitants—no small number as cities went at that time. As early as 1663 an English visitor, describing the place, wrote that "the buildings are handsome, joining one to the other, as in London, with many large streets, most of them paved with pebble-stones. In the high street toward the Common there are fine houses, some of stone"; and indeed, as one historian truly says, "Philadelphia was a forest and New York was an insignificant village long after its rival, Boston, had become a great commercial town."

OUR DECOROUS NEW ENGLAND SISTER

A very conservative and proper city is this New England sister, who perhaps exactly because of her age, which must amount now to the years of old-maidenhood, looks askance at the vulgarity and frivolous amuse-

ments of her younger sisters. Boston pays obeisance to tradition, is "quiet and refined" in her tastes, and observes the Sabbath day as duly as a big city can. Her people are overwhelmingly polite and unendingly intellectual, and those of the charmed inner circle whose forebears lived in Boston in her early days, are immutably exclusive. Yet there is a delightful flavor about this old city, most English of American cities, and there is no better place to spend a winter holiday, feasting the soul upon Boston's wealth of concerts, plays, and lectures. If one have entrée to the old red-brick houses of other times, so much the better, for there one gets the real Boston, the culture that lends grace as well as interest to its inmates, and there the lover of antiques feasts his soul upon massive mahogany and rare old china.

FUNDAMENTAL IDEALS

After all, Boston is a place of spiritual as well as intellectual culture, with that blessed quality of reverence—reverence for the things of the spirit as well as reverence for the past—which is so beautiful when it is genuine, and so sadly lacking in our American make-up. Boston is still colored by the transcendentalism that found its supreme utterance in Emerson, and even a commercial age must in a measure respect the city which considers "women and children first," forbids skyscrapers that shut out the blessed light of day, and holds its ancient graveyards as holy ground. The Westerner arrives prepared to scoff at petticoated Boston, top-heavy with intellect, and stays to praise, perhaps even bowing his head reverently with the rest.

SACRED AMERICAN RELICS

At least he will find much in Boston that will move him to homage—brave relics of the strenuous days when America in pain and tumult was being born. The famous Boston State House, a noble building fronting on Beacon Street at the summit of the hill, stands upon ground which in the eighteenth century was John Hancock's cow pasture. Within is the Memorial Hall containing the battle-flags of Massachusetts and other historical relics. Portraits, busts and statues of the great men of Massachusetts adorn the interior rooms. From the tower is the finest view of Boston and the surrounding lands and waters.

In the Representatives' Chamber hangs, high on the wall, one of the precious relics of the Old Bay State, a carved codfish, typifying a great industry, and recalling to the humorous-minded that ancient mooted question: "Does the codfish salt the ocean or the ocean salt the codfish?" This carved fish was hung in the old State House (still standing) on Washington Street in 1785, at the suggestion of Representative Rowe. A still more priceless relic is held by the State Library—the "Log of the Mayflower," written by Governor William Bradford.

Near the northern edge of the Common, at the corner of Park and Tremont Streets, is the old "Brimstone Corner," where stands the citadel of orthodoxy, the Puritan meeting-house, Park Street Church. Adjoining is an ancient graveyard, the "Old Granary Burying Ground," where lie the remains of some of the most famous men of Boston, John Hancock, Samuel Adams, Paul Revere, James Otis, Peter Faneuil, many of the colonial governors, and also the parents of Benjamin

Photo by Brown Bros.

BOSTON COMMON AND STATE HOUSE. The Common, a park of forty-eight acres, has been a public reservation since 1634 and no city park in the world is cherished more affectionately for its historical associations.

Photo by William H. Rau.

WHERE THE "BOSTON TEA PARTY" WAS PLANNED. The Old South Church of Boston has many associations. It was the meeting place of the people after the "Boston Massacre" of 1770, when they demanded the removal of the British troops, and here too were held the meetings that led up to the "Boston Tea Party" of 1773.

Franklin. On Tremont Street was established the first Episcopal Church in Boston, the King's Chapel, the present building replacing the original one in 1754. Adjacent is the oldest burying-place of the colony, where lie the remains of Governor John Winthrop and his sons, with other early settlers.

Various intricate streets and passages lead eastward from Tremont Street into Washington Street, the main thoroughfare of the city, having prominent theaters, newspaper offices, many of the largest stores and great office buildings. Benjamin Franklin was born in a little old dwelling near Washington Street, where now stands a newspaper office. Alongside is the Old South Church, the most famous church of Boston, but now a historical relic and museum of Revolutionary antiquities, the congregation having built themselves a magnificent temple, the "New Old South Church," upon Boylston Street, in the fashionable quarter of the Back Bay. This ancient church is a curious edifice of colonial style, built in 1729, when it replaced an earlier building. It has a tall spire and a clock, to which it is said more eyes are upturned than to any other dial in New England. The interior is square, with double galleries on the ends, and its original condition has been entirely restored. It was the colonial shrine of Boston, wherein were held the spirited meetings of the exciting days that hatched the Revolution. Franklin was baptized in the original church, and here Whitefield preached.

THE CRADLE OF LIBERTY

Dock Square is not far away, and Change Alley and other crooked passages lead over to the Boston "Cradle

of Liberty," Faneuil Hall. Old Peter Faneuil, a Huguenot merchant, built it for a market and presented it to the city in 1742, but it was unfortunately burned, being rebuilt in 1761. Within it were held the early town-meetings, and it is still the great place for popular assemblages. It was enlarged to its present size in 1805. This famous hall is a plain rectangular building, seventy-six feet square inside, the lower floor a market, and the upper portion an assembly room. It is located, with surmounting cupola, in an open square, and when anything excites the public it is crowded with audiences, standing, since there are no seats. Across the end is a raised platform for the orators, behind which, on the wall, is Healy's large painting, representing the United States Senate listening to a speech by Daniel Webster. There are numerous historical portraits on the walls. The "Ancient and Honorable Artillery Company," dating from 1638, occupy the floor above the Hall, while in front of it and extending towards the harbor is the Quincy Market.

BOSTON COMMON

The center around which Boston clusters is the well-known Boston Common, set apart in 1634, and always jealously reserved for public uses, the surface rising upon its northern verge towards Beacon Hill. No matter by what route approached, the city has the appearance of a broad cone with a wide-spreading base, ascending gradually to the bulb-like apex of the gilded State House dome.

The Common is rich in noble old trees, and covers nearly fifty acres, while to the westward is an additional

BOSTON OF THE LONG-AGO. An old map of the city out of which the modern Boston has grown. The Common with its Powder House, and Beacon Hill are conspicuous.

level park of half the size, known as the Public Garden, separated by a wide street accommodating the cross-town traffic. This noted Boston Common was the ancient Puritan pasture-ground, and it is rich in traditions. In the colonial wars, the captured hostile Indians were put to death here, their grinning heads impaled on stakes for a public warning. Murderers were gibbeted, witches burned and duels fought here. The impassioned George Whitefield, in the middle of the eighteenth century, preached here to a congregation of twenty thousand. An English traveler in the late seventeenth century described the place as "a small but pleasant Common where the gallants a little before sunset walk with their marmalet-madams till the bell at nine o'clock rings them home." Beacon Street is the northern border and Boylston Street the southern, and there are rows of stately elms upon the walks along these streets and the pathways leading across the Common in various directions.

THE LARGER CITY

Boston in alarming fashion outgrew its geographical limits, so in order to get available room and facilitate business the city has gathered the terminals of all the railways into two enormous stations on the northern and southern sides of the town, and for nearly a half century it has been filling in the fens and lowlands to the westward, so that now this reclaimed West End is the fashionable section, containing the finest churches, hotels, and residences. Through this splendid district extends for over a mile the grand Commonwealth Avenue, two hundred and forty feet wide, its center being a tree-

Photo by Brown Bros.

THE CRADLE OF LIBERTY. The upper story of this old market-house at the head of State Street in Boston was during revolutionary times frequently used for meetings of Patriots and hence the place came to be known as "The Cradle of Liberty." The building was erected by Peter Faneuil, a merchant, in 1761, was rebuilt after a fire in 1763, and enlarged in 1806.

Photo by Brown Bros.

UNDER THE ELMS OF HARVARD. One of the new dormitories in the oldest and still one of the most influential educational institutions in the United States. Harvard was founded in 1636 by the Massachusetts Bay Colony.

embowered park adorned by statues of Alexander Hamilton, John Glover, William Lloyd Garrison, and Leif Ericson, and having on either side a magnificent boulevard. The bordering residences are fronted by fascinating gardens, and at regular intervals fine streets cross at right angles, their names arranged alphabetically, in proceeding westward, with the well-known English titles, Arlington, Berkeley, Clarendon, Dartmouth, Exeter, Fairfield, Gloucester, Hereford, etc. Parallel to the Avenue are Boylston, Marlborough, Newbury and Beacon Streets. On Boylston Street are the stately buildings of the Museum of Natural History, and the Massachusetts Institute of Technology. Beyond, at the intersection of Dartmouth Street, is Copley Square, displaying around it the finest architectural group in the city, five magnificent buildings, three of them churches, including the famous Trinity Church in which Phillips Brooks preached.

THE PUBLIC LIBRARY

The Public Library, on the southern side, is the pride of all Boston, a splendid structure of pinkish-gray stone in Italian Renaissance style, suggesting a Florentine palace, erected at a cost of nearly two and a half millions. It has a fascinating inner cloistered court, bronze doors by Daniel Chester French, a staircase in Siena marble, panels by Puvis de Chavannes illustrating the history of science and literature, and other notable decorative paintings by John S. Sargent on the history of religion and by Edwin A. Abbey on the quest of the Holy Grail. One could spend many days in this one building alone, feasting one's eyes on the beauty that

has been gathered together to grace this storehouse of learning.

ART AND MUSIC

Boston has a splendid art life with many opportunities for students. The Museum of Fine Arts was founded in 1870 and the present beautiful building in the famous Back Bay Fens, the reclaimed swamps laid out by F. L. Olmstead, was erected in 1908. As a musical center the city rivals New York, and the Symphony Orchestra, organized in 1881, has a reputation beyond any other in the United States. It has the honor, too, of being the first great orchestra in America, and of having done incalculably much for the musical life of the country.

As a literary center Boston held undisputed first place until the later decades of the nineteenth century when New York, with its many publishing houses and teeming life, took precedence. It still retains, however, a considerable colony of writers, and at least two of its periodicals, the North American Review and the Atlantic Monthly, still do much to shape the thought of a host of readers.

"THE MOTHER CHURCH"

Of the many thought movements that have arisen in Boston, Christian Science is one, and few visitors to the city fail to admire the great memorial church established in 1894 and enlarged and reconstructed in 1906. It is indeed an impressive structure, and a noble monument to the memory of a woman who, we must admit, whether we accept Christian Science or not, did much to popularize a great and fundamental truth. The modern reaction

in medical practice against drugs and the increased study and use of principles of psychotherapy may be traced largely to the influence of Mary Baker Eddy.

BRAVE OLD HARVARD

And no visitor should fail to visit Harvard, "ancient of days," in dear old Cambridge town, where the elms of long ago still glorify barren brick buildings, and where associations with the most glorious period of American letters make the whole sleepy town sacred. Geographically Cambridge is practically a part of Boston and one may speed thither via the subway—Boston's famous Underground in which for a single fare one may travel by various labyrinthine ways between any two points in an area of a hundred square miles. In 1638 Cambridge was named in honor of the English university where many of the leading men of the colony had received their education; and when in the same year John Harvard died, bequeathing his books and half his estate to the wilderness seminary that had just been opened, his name was given to the college. The institution has played an important part in American history and many great names are on the list of alumni—Cotton Mather, the Adamses, William Ellery Channing, James Freeman Clarke, Theodore Parker, Thoreau, Emerson, Bancroft, Prescott, Motley, Parkman, Charles Sumner, etc. Longfellow's long and distinguished professorship at Harvard associated him with it rather than with Bowdoin, and here both Lowell and Holmes held professorships for many years.

Cambridge has other interests besides Harvard, too, for it was the site of the camp of the first American

army at the outbreak of the Revolution, and from it went the detachment which intrenched on Bunker Hill. Here is the old Vassall or Craigie House where Washington lived and which was later the home of Longfellow; and in "Elmwood," built in 1767, James Russell Lowell was born, lived and died. In Mt. Auburn Cemetery lie the remains of many men and women honored throughout the land.

BOSTON HARBOR

There is a picturesqueness about Boston Harbor, and viewed from that ancient busy place the city rises gradually ridge above ridge, until the center culminates in Beacon Hill, surmounted by the bright gilded dome and lantern-top of the State House. From all sides the land, with its varied surfaces of hill and vale, slopes down towards the water courses, leading into the deep indentation of the harbor.

In these waters there are at least fifty large and small islands, and most of these, which were bare in Winthrop's day, are now crowned with forts, lighthouses, almshouses, hospitals and other civic institutions. The splendid guiding beacon for the harbor entrance stands upon Little Brewster or Lighthouse Island, at the northern edge of Nantasket Roads. This is Boston Light, elevated about one hundred feet, a revolving light visible sixteen miles out. George's Island, near the entrance and commanding the approach from the sea, has upon it the chief defensive work of the harbor, Fort Warren, about two miles west of Boston Light. Farther in, and near the city, off South Boston, is Castle Island, with Fort Independence, the successor of the earliest Boston

Photo by William H. Rau

Craigie House, Replete with Memories. In this famous old elm-shaded house in Cambridge, near Harvard University, Washington made his headquarters, 1775–76, and here for forty-five years lived the poet Longfellow.

Photo by William H. Rau

THE LONGEST STRAIGHT STREET IN THE WORLD. Broad Street, Philadelphia, looking north to City Hall from the tower of which William Penn looks down upon the city of which he dreamed. On the left are Shubert Theater and the Academy of Music, while beyond them rises the Bellevue-Stratford Hotel. On the right are Broad Street Theater and Hotel Walton. The tall building with white trimmings is the Ritz-Carlton and the other skyscraper just beyond is the home of the Philadelphia North American.

fort, the "Castle," built by Winthrop in 1634. Opposite and about one mile northward is Governor's Island, containing Fort Winthrop. This island was originally the "Governor's garden," and Winthrop paid a yearly rent of two bushels of apples for it. It is a long cry from that day to this, but Boston Harbor is still a place of storied interest, with the fascination of many ships that sail the far seas, and as one glides out of the harbor at sundown it is with a feeling of gratitude to this oldest of cities that has given so much that is precious to America.

CHAPTER III

THE BIRTHPLACE OF AMERICAN LIBERTY

PHILADELPHIA, CITY OF ORIGINS — REMNANTS OF COLONIAL DAYS—THE CITY OF HOMES—THE QUAKER CITY—A PARK OF THREE THOUSAND ACRES—LOCOMOTIVES TO THE WHOLE WORLD—A PIONEER SHIPYARD —A PLACE OF VAST INDUSTRY.

TO WANDER through the older sections of Philadelphia, among its comfortable red-brick houses with white steps and quaint colonial doorways is to live again for a fleeting moment the days of William Penn and George Washington and Benjamin Franklin and all the other great Americans who have helped to make the city famous. To be sure many of the most fascinating of these old houses have gone down before the demands of a vastly busy commercial center, and many more have become the unlovely homes of under-fed and overworked immigrants; yet even the latter retain some of their other-century charm, and much of the newer architecture (that surrounding Independence Square, for instance, including the colossal Curtis Building of Ladies' Home Journal and Saturday Evening Post fame) carries out with beautiful conformity the ideals of a day that is long past. The Quaker City is indeed a place of inexhaustible surprise and perpetual interest. It is the city of origins, owing its birth as well as its early celebrity to the concurrent circumstances which helped to make the nation. Here is the actual birthplace of the

United States, for here the Declaration of Independence was drafted and promulgated; here the Constitution of the United States was framed and finally ratified; here was the first seat of the government of the great Commonwealth of States; here "Old Glory"—the Stars and Stripes—the flag of the nation, was first made; and here may be seen the old "Liberty Bell" whose bronze tongue first proclaimed "liberty throughout all the land."

REMNANTS OF COLONIAL DAYS

Upon the south side of Chestnut Street, running south to Walnut and occupying the block between Fifth and Sixth Streets, is Independence Square, tastefully laid out in flower-beds and lawns with wide and well-shaded walks. Upon the northern side of the square, and fronting Chestnut Street, is the most hallowed building of American patriotic memories, Independence Hall, a modest brick structure, yet the most interesting object Philadelphia contains. The Declaration of Independence was adopted here July 4, 1776. The old brick building, two stories high, plainly built, and lighted by large windows, was begun in 1732. It was the Government House of Penn's Province of Pennsylvania. In the central corridor stands the sacred "Liberty Bell." In the upper story of the hall, Washington delivered his Farewell Address in closing his term of office as president. The eastern room of the lower story is where the Revolutionary Congress met, and it is preserved as then, the old tables, chairs and other furniture having been gathered together, and portraits of the signers of the Declaration hang on the walls. Here are kept the famous "Rattlesnake flags," with the motto "Don't Tread on

Me," that were the earliest flags of America, preceding the Stars and Stripes.

Other historic places are near by. To the west is Congress Hall, where the Congress of the United States held its sessions prior to removal to Washington. To the east is the old City Hall, where the United States Supreme Court sat in the eighteenth century. Adjoining is the Hall of the American Philosophical Society, founded by Benjamin Franklin, and an outgrowth of his Junto Club of 1743. It has a fine library and many interesting relics. Franklin, who was the leading Philadelphian of the Revolutionary period, came to the city from Boston when eighteen years old, and died in 1790. His grave is not far away, in the old Quaker burying-ground on North Fifth Street. A fine bronze statue of Franklin adorns the plaza in front of the post-office building on Chestnut Street. Farther down Chestnut Street is the Hall of the Carpenters' Company, standing back from the street, where the first Colonial Congress met in 1774, paving the way for the Revolution. An inscription appropriately reads that "Within these walls, Henry, Hancock and Adams inspired the delegates of the colonies with nerve and sinew for the toils of war."

THE BETSY ROSS HOUSE

On Arch Street, near Third, is the house where Betsy Ross made the first American flag, with thirteen stars and thirteen stripes, from a design prepared by a Committee of Congress and General Washington in 1777. Originally there was a six-pointed star suggested by the committee, but she proposed the five-pointed star as more artistic, and they accepted it.

OLD CHURCHES

The most ancient church in Philadelphia is Gloria Dei, the "Old Swedes'" Church, a quaint little structure near the Delaware River bank in the southern part of the city, built in 1700. The quiet churchyard, maintaining still its atmosphere of peaceful beauty even in the heart of the slums, is a place where one delights to linger. The early Swedish settlers, coming up from Fort Christiana, erected a log chapel on this site in 1677, at which Jacob Fabritius delivered the first sermon. After he died, the King of Sweden in 1697 sent over Rev. Andrew Rudman, under whose guidance the present structure was built to replace the log chapel; and it was dedicated the first Sunday after Trinity, 1700, by Rev. Eric Biorck, who had come over with Rudman. Many are the tales of the escapades of the early Swedes in the day of the log chapel.

On Second Street is the venerable Christ Church, with its tall spire, built in 1727, the most revered Episcopal Church in the city, and the one at which General Washington and all the government officials in the Revolutionary days worshiped.

THE CITY OF HOMES

The enormous growth of the city geographically has come mainly from the adoption of the general principle that every family should live in its own house, supplemented by liberal extensions of subways and elevated and street railways. Hence, Philadelphia is popularly known as the "City of Homes" and it is only within recent years that apartments and flats have attained any popularity. As the city expanded over the level land,

four-, six-, eight- and ten-room dwellings have been built by the mile, and set up in row after row. Two-story and three-story houses of brick, make up the greater part of the town, and each house is generally its owner's castle, the owner in most cases being a successful toiler, who has saved his house gradually out of his hard earnings, almost literally brick by brick. There is almost unlimited space in the suburbs yet capable of similar absorption, and the process which has given Philadelphia this extensive surface goes on indefinitely. There used to be a tradition that one must live "south of Market Street" to be eligible for the inner social circle, and, so far as the city is concerned, this is still true, though many of the social set have moved to the suburbs.

Market Street is the great business thoroughfare, and by night it becomes a Great White Way with its blazing signs from theaters and other buildings. Chestnut Street, just one block south, is the place of shops plus atmosphere. It is a narrow street, but it is crowded during the business hours, and here may always be seen the foremost styles in feminine attire. Many exclusive shops are on Walnut Street, another block farther south. Broad Street and the splendid Parkway are the great driveways. With the opening of that remarkable engineering achievement, the Delaware River Bridge, Spring Garden Street is expected to become one of the chief highways of the city.

THE QUAKER CITY

The name of "Quaker City" still clings to Philadelphia, and something of the influence of the "plain" people who formed so large a proportion of the early inhabitants may be seen in the quieter tastes of the people, in the

"closed" Sundays, and in the general air of dignity that has given the City of Brotherly Love a unique place among American municipalities. William Penn, who founded the city, is honored by a colossal statue on the tall tower of City Hall.

The shape of the city is much like an hour-glass, between the rivers, although it spreads far west of the Schuylkill. The Delaware River, in front of the built-up portion, sweeps around a grand curve from northeast to south, and then reversing the movement, flows around the Horseshoe Bend below the city, from south to west, to meet the Schuylkill.

When Penn laid out his town-plan, he made two broad highways pointing toward the cardinal points of the compass and crossing at right angles in the center, where he located a public square of ten acres. The east and west street, one hundred feet wide, he placed at the narrowest part of the hour-glass, where the rivers approached within two miles of each other. This he called High Street, but the public persisted in calling it Market Street. The north and south street, laid out in the center of the plat, at its southern end reached the Delaware near the confluence with the Schuylkill. This street is one hundred and thirteen feet wide, Broad Street, a magnificent thoroughfare stretching for miles and bordered with handsome buildings. Upon the Center Square was built a Quaker meeting-house, for the Friends, while yet occupying the caves on the bluff banks of the Delaware that were their earliest dwellings, showed anxiety to maintain their form of worship. This meeting-house has since multiplied into scores in the city and adjacent districts; for the sect, while not increasing

in numbers, holds its own in wealth and importance, and has great influence in modern Philadelphia. Afterwards the Center Square was used for the city water-works, and finally it was made the site of the City Hall.

This great building, covering four acres, is more impressive than beautiful, being built in a day that is now happily past; but a trip to the tower is well worth a visit, for from here one may see the great city, laid out for miles and miles in its unrelenting rectangles.

A PARK OF THREE THOUSAND ACRES

All Philadelphians are justly proud of Fairmount Park, one of the world's largest pleasure grounds. It includes the lands bordering both sides of the Schuylkill, having been primarily established to protect the water-supply. There are nearly three thousand acres in the park, and its sloping hillsides and charming water views give it unrivaled advantages in natural scenery. At the southern end is the oldest water reservoir of six acres, on top of a curious and isolated conical hill about ninety feet high, which is the "Fair Mount," giving the park its name. The Schuylkill is dammed here to retain the water, and the park borders the river for several miles above, and its tributary, the Wissahickon, for six miles farther.

The Parkway, which brings the park into the very heart of the city, promises to be one of the most splendid driveways in the world. Here are the new Library, the new Museum, and other notable buildings. At the park entrance is a colossal equestrian statue of George Washington, and beyond is a fine bronze statue of Lincoln, also an equestrian statue of General Grant. The East and West River Drives afford a series of unrivaled views. The frequent

Photo by William H. Rau

In Honor of Betsy Ross. On Arch Street near the Delaware River in Philadelphia is preserved as a national monument the house in which Betsy Ross in 1777 made the first flag of the United States.

NOT HENLEY, BUT PHILADELPHIA. A regatta on the Schuylkill River in Fairmount Park. The boat races are always occasions of great delight to the many thousand frequenters of this huge city playground.

bridges thrown across the river, several of them carrying railroads, add to the charm, and an electric railway is constructed through the more remote portions. All around this spacious park the growing city has extended, and prosperous manufacturing suburbs spread up from the river, the chief being the carpet district of the Falls and the cotton mills of Manayunk, the latter on the location of an old-time Indian village, whose name translated means "the place of rum." In this park, west of the Schuylkill, was held the Centennial Exposition of 1876, and several of the buildings remain, notably the Memorial Art Gallery, now a museum, and Horticultural Hall. William Penn's "Letitia House," his original residence, removed from the older part of the city, now stands near the entrance to the West Park.

The Wissahickon, most picturesque of wooded drives along a winding stream, is barred to all "sightseeing" automobiles and the upper portions even to private cars, but the glen is well worth a visit, whether one drives behind horses or follows the narrow footpath.

LOCOMOTIVES TO THE WHOLE WORLD

For the more practical-minded visitor the industrial plants of Philadelphia have keen interest, especially the Baldwin Locomotive Works, founded in 1831 by Matthias W. Baldwin who completed his first locomotive, the "Old Ironsides," in that year. From modest beginnings, the business gradually increased until the works became the largest locomotive establishment in the world. Baldwin locomotives may now be found in practically all parts of the world where railways have been built.

The principal plant of the works is located in the city,

occupying over seventeen acres of ground, while at Eddystone, about twelve miles from the city, on the Delaware River, there is a tract of over 225 acres, where large foundry, pattern, blacksmith and erecting shops are in operation.

The rated capacity of the works is 2500 locomotives per annum, and when working on this basis nineteen thousand men are employed. Approximately 3850 tons of coal, 125,000 gallons of fuel oil, six thousand tons of iron and steel and 2500 tons of other materials are used in the works each week when running at full capacity.

A PIONEER SHIPYARD

Cramps' Shipyard, like the Baldwin Locomotive Works, is known around the world. In 1830 William Cramp, a pioneer shipbuilder of German descent, established an industry on the Delaware River, and his son, who showed a special aptitude as a naval architect, built up a great industry. Other shipyards have gathered on the river, and Philadelphia was in 1915 not only the largest shipbuilding center in the United States, but a close rival for world honors.

HOG ISLAND

When the United States entered the Great War in 1917, the matter of paramount importance was to supply ships to take the place of those sunk by German submarines. The most ambitious of the shipyards that sprang up with amazing speed was that at Hog Island, on the Delaware, southwest of Philadelphia. This was the largest shipyard in the world. Its construction was a marvelous feat of engineering skill. Little more

than a wild swamp, its 927 acres were transformed within a few months into an up-to-date shipyard of giant proportions, with 50 shipways, 82 miles of standard gauge railroad track, 70 locomotive trains, 469 freight cars, a telephone system that would serve a city of 100,000 inhabitants, 4 fire stations, and a police organization sufficient for a city of 50,000 population.

A PLACE OF VAST INDUSTRY

Philadelphia has been well called "the Workshop of the World." It is the largest fresh-water harbor on the Atlantic seaboard, and the facilities of this great port are constantly being added to. The railroad and commercial facilities, the proximity to the coal fields, and the ample room to spread in all directions have attracted to it some two million inhabitants.

Philadelphia-made locomotives ride the rails in nearly every country in the world. Wherever street cars are used a Philadelphia-made product will be found. In the equatorial countries, as well as in more frigid climes, Philadelphia-made hats are worn. Books and Bibles bearing the imprint of the great publishing houses of Philadelphia are exported to every civilized country on the planet. This city is the textile capital of the world. Phonographs, drugs, coal, petroleum, steel and iron, cotton, leather, and a thousand other commodities that enhance and enrich life come from Philadelphia.

It is hard to believe that the little unpretentious settlement of William Penn on the Delaware has grown to such vast proportions. But still towering over this great community is the calm figure of its founder, and much of the spirit of the noble Quaker remains.

CHAPTER IV

PLAYGROUNDS OF THE EAST

UNDER THE BLUE SKIES OF MAINE—THE FASHIONABLE WORLD OF BAR HARBOR—IN THE WHITE MOUNTAINS—NEWPORT, WHERE MILLIONAIRES CONGREGATE—ATLANTIC CITY, A GREAT DEMOCRATIC GATHERING PLACE.

MAINE SEES many thousands of summer tourists, and few of those who once visit her shores or penetrate into her forests fail to succumb to the magic spell of her blue skies and fragrant breezes. Easterners who know only boredom on the level, barren sands of the New Jersey coast are enthusiastic about the Pine Tree State, for here one may find either on the shore or on one of the outlying islands all the charm of mountain as well as sea—cool weather that is tonic, picturesque, rocky cliffs, and spicy woods where white-throated sparrows, and even the hermit thrush, most timid and most musical of birds, sing, and charming meadowland, too, a gorgeous flower-embroidered tapestry in early summer.

Not the most charming of Maine resorts, but perhaps the most talked of, is Mount Desert Island. Champlain, impressed with its craggy, desolate summits, named it the *Isle des Monts déserts*, the "Island of Desert Mountains." He then wrote of it, "The land is very high, intersected by passes, appearing from the sea like seven or eight mountains ranged near each other; the summits of the greater part of these are bare of trees, because

THE WONDER CITY BY THE SEA. Atlantic City: famous around the world for its Ten-Mile Boardwalk, its crowds, its beaches, its caravansaries, and its pageants; the greatest of American resorts

Photo by William H. Rau

THE MAKING OF A SHIP. At Cramp's shipyard (established on the Delaware in Philadelphia in 1830) many of the nation's great battleships have been constructed and here ships have also been built for many foreign nations.

they are nothing but rocks." Green Mountain is the highest, rising over fifteen hundred feet, near the eastern side, while Western Mountain terminates the range on the other side, and at the eastern verge is Newport Mountain, having the fashionable settlement of Bar Harbor at its northern base. There are several beautiful lakes high up among these peaks, the chief being Eagle Lake. Beech and Dog Mountains have peculiarities of outline, and a wider opening between two ponderous peaks shows where the sea has driven in the strange and deeply carved inlet of Somes' Sound, six miles from the southern side, almost bisecting the island.

Hung closely upon the coast of Maine, in Frenchman Bay, this noted island, the ancient Indian Pemetic, is about fifteen miles long, of varying width, and covers a hundred square miles. It has many picturesque features, its mountains, which run in roughly parallel ridges north and south, separated by narrow trough-like valleys, displaying thirteen distinct eminences, the eastern summits being the highest, and terminating generally at or near the water's edge on that side in precipitous cliffs, with the waves dashing against their bases. Upon the southeastern coast, fronting the ocean, as a fitting termination to the grand scenery of these mountain-ranges, the border of the Atlantic is a galaxy of stupendous cliffs, the two most remarkable being of national fame—Schooner Head and Great Head—the full force of old ocean driving against their massive rocky buttresses. Schooner Head has a surface of white rock on its face, which when seen from the sea is fancied to resemble the sails of a small vessel, apparently moving in front of the giant cliff. Great Head, two miles southward, is

an abrupt projecting mass of rock, the grim and bold escarpment having deep gashes across the base, evidently worn by the waves. It is the highest headland on the island. Castle Head is a perpendicular columned mass, appearing like a colossal, castellated doorway, flanked by square towers.

THE FASHIONABLE WORLD OF BAR HARBOR

Bar Harbor, an indentation of Frenchman Bay, having a bar uncovered at low tide, became the fashionable resort of Mount Desert. It has a charming outlook over the bay, with its fleets of gaily-bannered yachts and canoes, but is nothing more than a town of summer hotels and boarding-houses, built upon what was a treeless plain, the outskirts consisting of cottages, many of great pretensions. Its bane, to those who have not artist-souls, is the fog, a frequent sojourner in the summer. There are days when the mist creeps over the water and finally blots out the landscape. But light breezes and warm sunshine then soon disperse it and the view reappears. The fog-rifts are wonderful picture-makers. Sometimes the mist obscures the sea and lower shores of the neighboring islands, leaving a narrow fringe of tree-tops resting against the horizon, as if suspended in mid-air, and often a yacht sails through the fog, looking like a colossal ghost, when suddenly its sails flash out in the sunlight like huge wings.

IN THE WHITE MOUNTAINS

From Portland, Maine, one may travel into the famous White Mountain region, the varied and impressive scenery of which make it a favorite resort.

Here in the Franconia group is the "Old Man of the Mountain," about which Hawthorne has so delightfully written. The white man's discovery of this profile was made in the early nineteenth century by two road-makers, mending the highway through the Notch. Stooping to wash their hands in the lake, just at the right spot, they casually looked up and saw it, being struck instantly by the wonderful facial resemblance. "That is Jefferson," said one of them. Thomas Jefferson was then president of the United States, and the stern countenance certainly looks like some of his portraits. There he is still, gazing far away, with sturdy, unchanging expression, as he has done for thousands of years.

MOUNT WASHINGTON

The Fabyan House, in front of Mount Washington, stands upon the location of the "Giant's Grave," which is an elongated mound of sand and gravel formed by the waves of an ancient lake, reacting from the adjacent mountain slopes, and rising about fifty feet. The tradition is that once a fierce-looking Indian stood upon this mound at night, waving a flaming torch and shouting "No pale-face shall take root here; this the Great Spirit whispered in my ear." The successive burnings of hotels on this site would seem to indicate this as prophetic, and in fact no hotel did stand there any length of time until the projectors of the present large building, after the last one was burned, as if to avoid fate, had the mound making the "Giant's Grave" leveled and obliterated. Here was built the earliest inn of the White Mountains in 1803 by a sawmill owner on the

Ammonoosuc River, named Crawford. His grandson, Ethan Allen Crawford, the famous "White Mountain Giant," was the noted guide who made the first path to ascend Mount Washington and built the first house on its summit. Now the mountain is ascended from this western side by an inclined-plane railway, reached by an ordinary railway extending from Fabyan's, five miles across, to the base of the mountain. The railway to the summit is about three miles long, and is worked by a cog-wheel locomotive acting upon a central cogged rail. It is an exhilarating ride up the slope, for, as the car is elevated, the horizon widens decidedly to the west and northwest, while the trees of the forest become smaller and smaller, and their character changes. The sugar-maples, yellow birches and mossy-trunked beeches, with an occasional aspen or mountain ash, are gradually left behind in the valley, being replaced on the higher slope by white pine and hemlock, white birch, and dark spruces and firs hung with gray moss. These gradually becoming smaller; soon the only trees left are a sort of dwarf fir intertangled with moss. Then, rising above the limit of trees, there is only a stunted arctic vegetation, and this permits an unobstructed view all around the western horizon.

The top of Mount Washington is the highest elevation in the United States east of the Rockies and north of the Carolinas. It is what may be described as an arctic island, elevated sixty-two hundred and ninety feet, in the temperate zone, and displaying both arctic vegetation and temperature, the flora and climate being like that of Greenland. An observatory gives a higher

Photo by William H. Rau

UNDER THE BLUE SKY OF MAINE. The pleasure ground of Bar Harbor, on Mount Desert, to which fashionable Easteners escape from summer heat. A place of endless charm, redolent with pines and the salt fragrance of the sea.

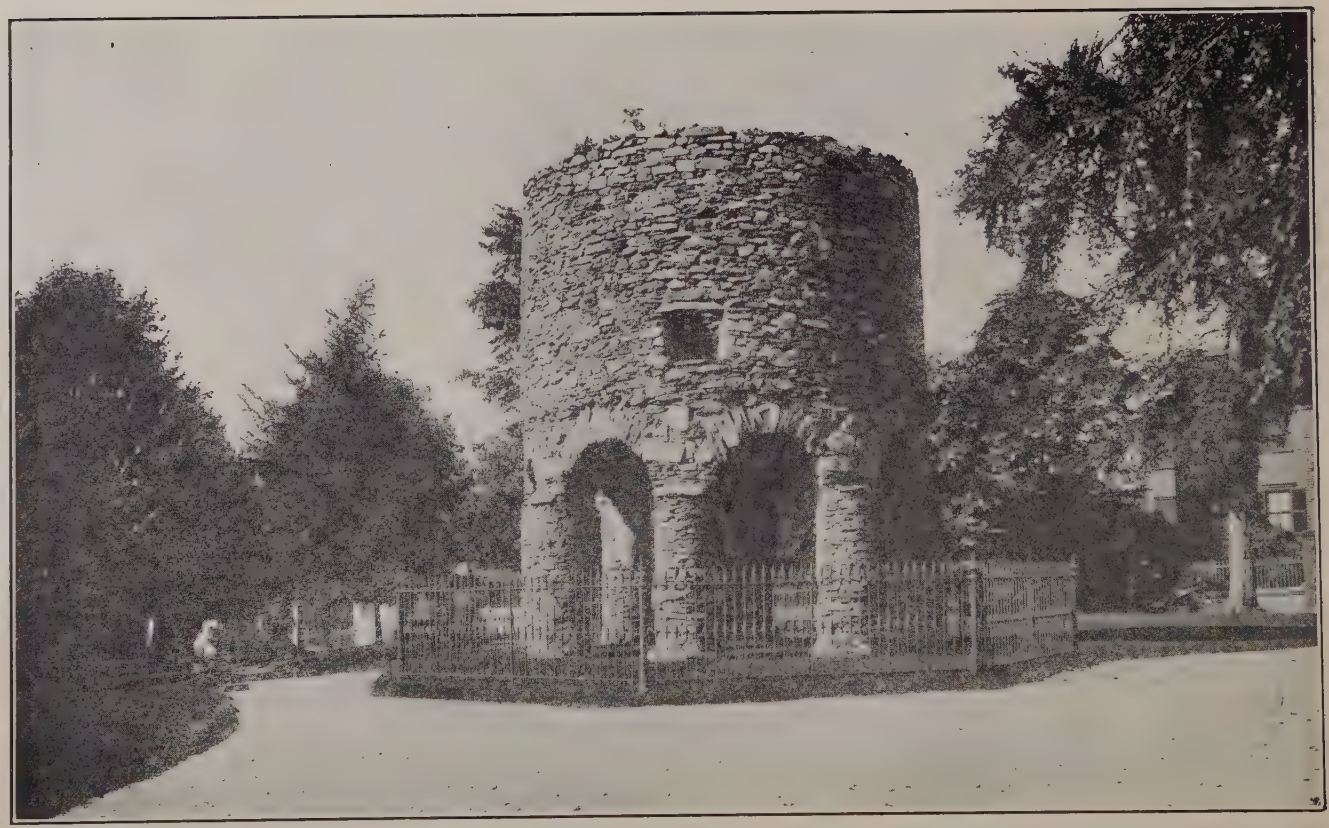


Photo by William H. Rau

THE MYSTERIOUS ROUND TOWER OF NEWPORT. This old tower Longfellow, in accordance with the contention of certain members of the Society of Danish Antiquarians, ascribes in his "Skeleton in Armor" to the Norsemen, but the origin is uncertain.

view over the tops of the buildings, and the first great impression of it is that the view seems to be all around the world, limited only by the horizon. In every direction are oceans of billowy peaks, the whole enormous circuit of almost a thousand miles, embracing New England, New York, Canada and the sea. The grand scene is at the same time gloomy.

The summit is spacious, and the contour of the mountain can on all sides be plainly seen. Its slope to the westward, like all of the Presidential range, is steeper than to the eastward, down which a wagon-road zigzags into the Glen. Upon the eastern side, two long spurs seem to brace the mountain, though profound ravines are there cut into it. The southern slope of the summit pitches off suddenly, while to the north there is a more gradual descent, both the railway and wagon-road approaching that way. The original Tip-Top House, the first inn erected, is preserved as a curiosity, a low and damp structure built of the rough stones gathered on the mountain. The newer hotel is of wood, with a steep roof, and is chained down to the rocks to prevent the gales from blowing it over. There is a weather-signal station at the summit, one of the most important posts in the country.

NEWPORT, WHERE MILLIONAIRES CONGREGATE

Still more far-famed than Bar Harbor as a resort of the fashionable world is Newport in Rhode Island. Unlike most American watering-places, Newport is not an aggregation of hotels and lodging-houses, but is preeminently a gathering of the costliest and most elaborate suburban homes this country can show. Built upon

the extensive space surrounding the older town, and between it and the ocean, south and east, modern Newport is a galaxy of large and expensive country-houses, each in an inclosure of lawns, flower-gardens and foliage, highly ornamental and exceedingly well kept. Many of them are spacious palaces upon which enormous sums have been expended; and in front of their lawns, for several miles along the winding brow of the cliffs that fall off precipitously to the ocean's edge, is laid the noted "Cliff Walk." This is a narrow footpath at the edge of the greensward that has the waves dashing against the bases of the rocks supporting it.

Each house has its architecture, and no matter how grand and imposing, each is called a "cottage." The greatest rivalry has been shown in construction, and the styles cover all known methods of building—Gothic, Elizabethan, Swiss, Flemish, French, etc.

There have been lavished upon these palaces of Newport, in construction and decoration, large portions of the greatest incomes of the multi-millionaires of New York and Boston, and hither they hie to enjoy the summer and early autumn in a sort of fashionable semi-seclusion, mingling only in their own sets, and rather resenting the excursions occasionally made by the plebeian folk into Newport to look at their displays. These princes of inherited wealth have made Newport peculiarly their own, and, their expenditures being on a scale commensurate with their millions, the growth and improvement of the newer part of the place have been extraordinary.

The Casino is the fashionable center of Newport, a building in Old English style, fronting on Bellevue

Avenue, having reading-rooms, a theater, gardens and tennis court, and here the band plays in the season, and there are concerts and balls. During the fashionable period, Bellevue Avenue is the daily scene of a stately procession of handsome equipages of all styles, as it is decreed that the great people of Newport shall always ride when on exhibition, and they thus pass and repass in the afternoons in splendid review. Touro Park is a pretty enclosure in the older town, containing statues of Commodore M. C. Perry and William Ellery Channing, who were natives of Newport, and a statue of the former's brother, Commodore Oliver H. Perry, the victor of Lake Erie, is also at the City Hall, not far away.

THE OLD STONE MILL

In Touro Park is the great memorial around which the antiquarian treasures of this famous place are clustered, the Old Stone Mill, a small round tower, overrun with ivy and supported on pillars between which are arched openings. Its origin is a mystery, though Longfellow tells weirdly of it in his "Skeleton in Armor," and some of the wise men suggest that it was built by the Norsemen when they first came this way and found Vinland so long ago. But the more practical townsfolk generally incline to the belief that an early colonist put it up for a windmill to grind corn, the weight of the evidence appearing to favor the theory that it was erected by Governor Benedict Arnold, of the colony, who died in 1678, and described it in his will as "my stone-built wind-mill." It is, however, of sufficient antiquity and mystery to have a halo cast around it, and is the great relic of the town.

ATLANTIC CITY, A GREAT DEMOCRATIC GATHERING PLACE

The New Jersey seacoast is a succession of watering places which city-dwellers frequent in search of cool breezes and stimulating surf baths. The coast is a series of sandy beaches broken by bays and inlets, and a broad belt of pine lands behind them separate the sea and its bordering sounds and meadows from the farming region. The resorts form an almost unbroken chain from Cape May at the southern extremity to Sandy Hook, where the long sand-strip terminates at the entrance to New York harbor, but the chief of these is Atlantic City, with its gay pleasure piers and huge boardwalk where a hundred thousand people congregate in the Easter promenade. Three railroads lead over from Philadelphia across the level Jersey country, and fast trains cover the distance in an hour.

To Atlantic City belongs the credit of having originated a boardwalk by the sea—a feature which has since been adopted at other resorts. The first walk was built in 1870, a fund of $5,000 having been raised for that purpose by the sale of city script. The venture was regarded in an unfavorable light by many of the conservative citizens, some of whom were large owners of real estate, but the younger men carried the project through on money privately borrowed until the issue of the city obligations could be legalized. The boardwalk was destroyed by severe storms in the winter of 1883–4, but was rebuilt in a more substantial manner in the spring of 1884 at a cost of less than $10,000. Since then the walk has been improved and rebuilt until it is now from twenty to sixty feet in width and nine miles long, the cost exceeding $500,000.

It is lined on one side with hotels, pavilions, shops and amusement buildings. The ocean side gives an unobstructed outlook over beach, surf and sea. Five amusement piers one thousand feet in length extend from the walk into the ocean. These contain theaters, music halls, restaurants, ball rooms, bazars, picture shows and an endless variety of amusement places. The boardwalk is brilliantly lighted at night by myriads of electric lights, and here the gay crowds throng seeking entertainment. The shops themselves offer diversion, for many contain rare collections of Oriental goods, priceless rugs and fascinating curios.

But the boardwalk is not the only attraction of Atlantic City, for there is a fine bathing beach, opportunities for sailing and fishing, and even a country club with fine golf links. All sorts of pleasure for all sorts of seekers Atlantic City offers, and all things considered it is the most American of American resorts.

CHAPTER V

NATURAL WONDERS OF THE EAST

THE FAIRY REALM OF LURAY CAVERNS—MAMMOTH CAVE, KENTUCKY—NATURAL BRIDGE—NIAGARA OF A THOUSAND MOODS.

WE READ in Coleridge's "Kubla Khan" of "caverns measureless to man," and such indeed are the actual caverns of Luray, a veritable fairy realm beneath the earth in the famous Shenandoah Valley of Virginia. Since their discovery in 1878, however, the caves have been thoroughly explored and charted so that the visitor may penetrate the labyrinthine passages and still find his way back to the common light of day.

Entering the grand vestibule, the first emotion one feels is that of mute wonder. The mind fails to grasp the grandeur revealed in such a majestic manner, until it gradually accustoms itself to the fantastic shapes, the almost oppressive silence and the weird influence of this subterranean realm. Queer shapes present themselves at every turn, aping grotesquely the objects of the outer world, suggesting some animal, some familiar vegetable formation, or some creation of man. Glittering stalactites blaze in front, fluted columns, draperies in broad folds, cascades of snow-white stone, illuminated by the glare of the electric light, fill the mind with wonder and awe. One stands amazed in the royal chambers of Nature.

Various apartments and objects have been named in

honor of some distinguished personage or after some thing to which they bear a striking resemblance. The Elfin Ramble, an open plateau five hundred feet long by one hundred wide, is the playground of the princesses of this fairy realm. Pluto's Chasm, a wide rift in the walls, contains a specter clothed in shadowy draperies. Hovey's Hall is adorned with statuary and stalactite draperies, which, for beauty of coloring, translucency and symmetrical folding, are unexcelled by anything in the cave. Giant's Hall is a vast space, embracing several chambers. Heroic sentinel forms loom up on every side, guarding the marvelous beauty of Titania's Veil, and watching over the crystal waters of Diana's Bath. The Saracen's Tent, the Cathedral, with its grand organ, and the Bridal Chamber, all look amazingly like the objects for which they are named. Hades, a region sparkling with limpid lakes and peopled with goblins, receives its name from the bewildering labyrinth through which the tourist must tread his way, but notwithstanding its uninviting name, it is a very attractive portion of the cave and contains many wonderful formations. The Ball Room, a magnificent apartment, furnished, is full of interest, while Campbell's Hall, named for the discoverer of the cave, is likewise rich in ornamentation.

The temperature of Luray is uniformly 54° Fahr. and the air is so pure that it has been forced for therapeutic purposes through all the rooms of the Limair sanatorium built on the summit of Cave Hill. Tests made for several years demonstrated the perfect bacteriologic purity of the air, which is practically filtered, being drawn into the cave through myriads of rocky crevices and

further cleansed by floating over transparent springs and pools.

The waters of the cavern seem to be wholly destitute of life and the only existing creatures are a few bats, rats, mice, spiders, flies and small centipedes, though when the cave was first entered the floor was covered with the footprints of former inhabitants—raccoons, bears and wolves. Traces of human habitation there were, too—charcoal, flint, moccasin tracks, and even a skeleton embedded in stalagmite, estimated to have lain where found for about five hundred years.

The caverns are carved from Silurian limestone, and at some period subsequent to their original excavation they were completely filled with glacial mud, heavily acid, by means of which the dripstone was eroded into its present grotesque shapes. The stalactitic display exceeds that of any other known cavern.

MAMMOTH CAVE

About ninety miles south of Louisville is the famous Mammoth Cave of Kentucky. This is the largest known cavern in the world, extending for a distance of nine or ten miles, the various avenues that have been explored having a total length approximating two hundred miles. The carboniferous limestones of Kentucky, in which the cave is located, occupy an area of eight thousand square miles, and the geologists estimate that there are probably a hundred thousand miles of open caverns beneath this surface. There is a hotel near the cave entrance, and the mouth is reached by passing down a rocky ravine through the forest. It is a sort of funnel-shaped opening

Photo by Brown Bros.

VAUGHN'S DOME. Among the most surprising features of scenery in Mammoth Cave, Kentucky, are the vertical shafts, sometimes over a hundred feet, that pierce through all levels from the uppermost galleries down to the lowest floor.

Courtesy of The Nation's Business

MUSCLE SHOALS. A view looking across the Tennessee River at the site of Muscle Shoals Dam No. 2, now called "Wilson Dam." The giant nitrate plant built here by the United States Government for explosives for the war, was closed down after the armistice. Henry Ford's offer to buy the plant as a peace-time industry for the manufacture of nitrates for fertilizer purposes brought the great project again before the public at the beginning of 1922.

about a hundred feet in diameter at the top, with steep walls fifty feet high.

A hunter accidentally discovered the cave in 1809, and for years afterwards it was entered chiefly to obtain niter for the manufacture of gunpowder, especially during the War of 1812, the niter being found in deposits on the cave floor, mainly near the entrance, and owing its origin to the accumulation of animal remains, mostly of bats, in which the cave abounds.

Upon entering the cave, the first impression is made by a chaos of limestone formations, moist with water oozing from above, and then is immediately felt what is known as "the breath" of the cave. It has pure air and an even temperature of 52° to 56°, maintained all the year round. In summer the relatively cooler air flows out of the entrance, while in winter the colder air outside is drawn in, and this makes the movement of "the breath" at once apparent from the difference of temperature and currents of wind when passing the entrance. For nearly a half-mile within are seen the remains of the government niter-works, the vats are undecayed, and ruts of cart-wheels are traceable on the floor. The Rotunda is then entered, a hall seventy-five high and 160 feet across, out of which avenues lead in various directions. The vast interior contains a succession of wonderful chambers, domes, abysses, grottoes, lakes, rivers, cataracts, stalactites, etc.

There are eyeless fish and crawfish, and a prolific population of bats. In the subterranean explorations there are two routes usually followed, a short one of eight miles and another of twenty miles. Various appropriate names are given the different parts of the cave,

and curious and interesting legends are told about them, one of the tales being of the Bridal Chamber, which got its name because an ingenious maiden who had promised at the deathbed of her mother she would not marry any man on the face of the earth, came down here and was wedded.

NATURAL BRIDGE

About a hundred miles south of Luray is another impressive and wonderful sight—the Natural Bridge of Virginia. Many tourists annually visit this interesting section of the South.

The chief river of Virginia is the James, a noble stream, rising in the Alleghanies and flowing for 450 miles from the western border of the Old Dominion until it falls into Chesapeake Bay at Hampton Roads. Its sources are in a region noted for mineral springs, and the union of Jackson and Cowpasture Rivers makes the James, which flows to the base of the Blue Ridge, and there receives a smaller tributary, not inappropriately named the Calfpasture River. The James breaks through the Blue Ridge by a magnificent gorge at Balcony Falls. Seven miles away, spanning the little stream known as Cedar Brook, is the bridge, an arch of blue limestone, 215 feet high, ninety feet wide, with a span of a hundred feet thrown across the chasm. Overlooking the river and the bridge and all the country roundabout are the two noble Peaks of Otter, rising about four thousand feet, the highest mountains in that part of the Alleghanies.

The Natural Bridge is situated at the extremity of a deep chasm, through which a brook flows, and across the top of which extends a rocky stratum in the form of a

graceful arch. It looks as if the limestone rock had originally covered the entire stream bed, which then flowed through a subterranean tunnel, the rest of the limestone roof having fallen in and been gradually washed away. The crown of the arch is forty feet thick, the rocky walls are perpendicular, and over the top passes a public road, which, since it is on the same level as the immediately adjacent country, one may cross in a coach without noticing the chasm beneath. Various large forest trees grow beneath and under the arch, but are not tall enough to reach it; and on the rocky abutments are carved the names of many persons who have climbed as high as they dared on the steep face of the precipice. Highest of all, for about seventy years, was the name of Washington, who, in his youth, ascended about twenty-five feet to a point never before reached; but this feat was surpassed in 1818 by James Piper, a college student, who actually climbed from the foot to the top of the rock. In 1774 Thomas Jefferson obtained a grant of land from George III which included the Natural Bridge, and he was long the owner, building the first house there, a log cabin with two rooms, one being for the reception of strangers.

NIAGARA OF A THOUSAND MOODS

"God's greatest miracle in stone," Chief Justice Marshall said of the Natural Bridge; but greater by far is the miracle of water at Niagara, pounding its tumultuous way year after year "against the rocks of time." The Indians gave to the Falls the appropriate name of "The Thunder of Waters," and deafening indeed is the roar of this mighty cataract.

It has been said that Niagara has a thousand moods, and certain it is that its face is ever changing, though ever beautiful, whether one look on it through rainbow mists or in the gloom of night. There is in some ways no spectacle in the world so impressive: many scenes display the beauty and wonder of Nature; none so well as this her elemental force and magnificence.

The Lake Erie level is 564 feet above the sea, and in its tortuous course of about thirty-six miles to Lake Ontario, the Niagara River descends 333 feet, leaving the level of Ontario still 231 feet above the sea. More than half of all the fresh water on the entire globe—the whole enormous volume from the vast lake region of North America, draining a territory equaling the entire continent of Europe, pours through this contracted channel out of Lake Erie. There is a swift current for several miles, but farther on the speed is gentler as the channel broadens, and Grand Island divides it. Then it reunites into a wider stream, flowing sluggishly westward with small islands dotting the surface. About fifteen miles from Lake Erie the river narrows and the rapids begin. They flow with great speed for a mile above the falls, in this distance descending fifty-two feet. Goat Island divides their channel at the brink of the cataract, where the river makes a bend from the west back to the north. This island separates the waters, although nine-tenths go over the Canadian fall, which the abrupt bend curves into horseshoe form. This fall is about 158 feet high, and the height of the smaller fall on the American side is 165 feet. The two cataracts spread out to 4,750 feet breadth, though the steep wooded bank of Goat Island, which separates them,

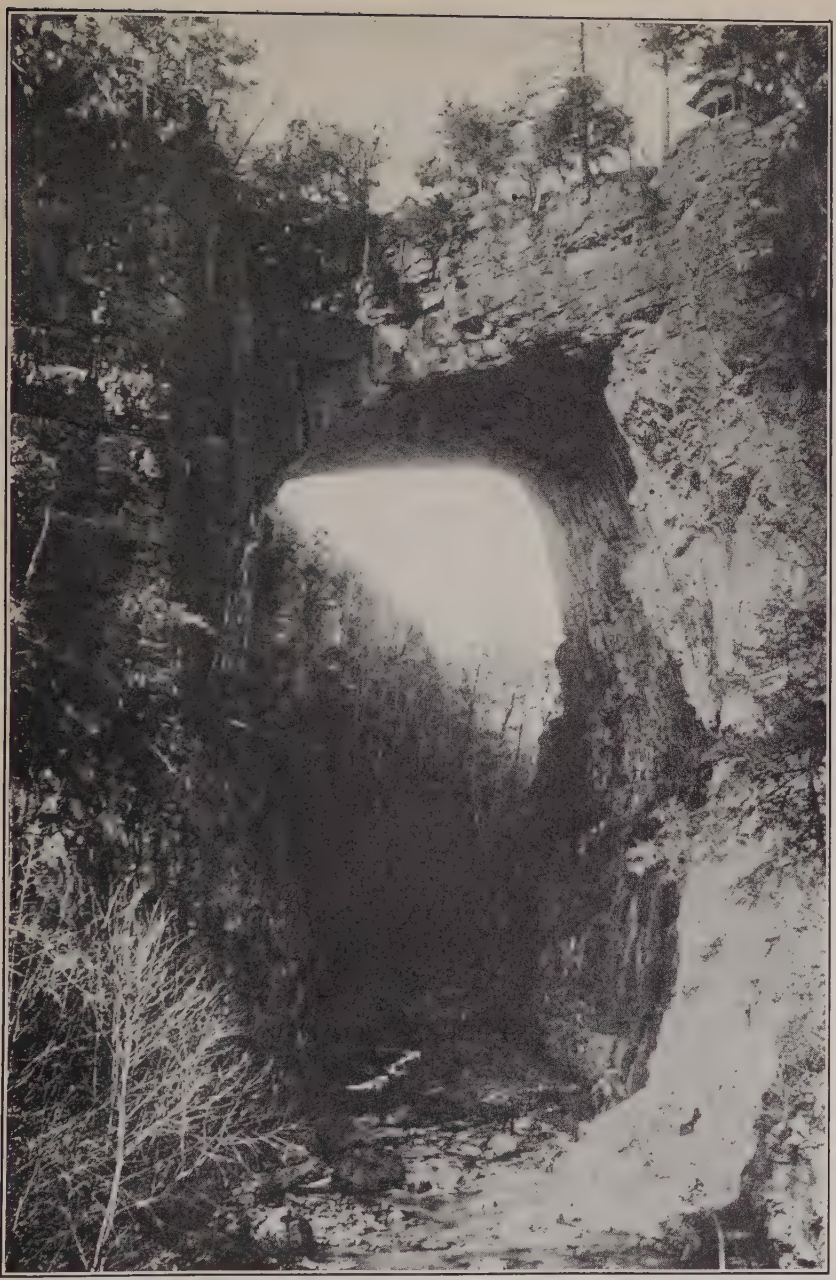


Photo by Brown Bros

In the Blue Ridge Country. Natural Bridge, Virginia, which Henry Clay once described as "a bridge not made with hands, that spans a river, carries a highway, and makes two mountains one."

Photo by William H. Rau

FOREVER RUSHING AND FOREVER WONDERFUL. Niagara Falls from Prospect Point on the American side, looking southwest, across and up the stream. The American Falls may be seen in the foreground rushing past to make their plunge of 165 feet to the rocks below.

occupies about one-fourth the distance, but the river, just below the cataract, contracts to about one thousand feet.

ALONG THE RAPIDS

For seven miles the gorge is carved out, the river banks on both sides rising to the top level of the falls, and the bottom sinking deeper and deeper as the lower rapids descend towards Lewiston, and in some places contracting to very narrow limits. Two miles below the cataract the river is compressed within eight hundred feet, and a mile farther down, at the outlet of the Whirlpool, where a sharp right-angled turn is made, the enormous current is contracted within a passage of less than two hundred and fifty feet in width. In the seven miles distance, these lower rapids descend over a hundred feet, and then with placid current the Niagara River flows a few miles farther northward to Lake Ontario.

The tremendous horsepower of Niagara is not the least wonderful of the facts connected with the falls, and the practical-minded visitor will be much interested in the extensive power houses that have been constructed. The average flow of water over both falls is estimated to be 222,400 cubic feet per second, representing a potential horsepower of some 4,900,000. The power of the falls was utilized for the operation of a sawmill as early as 1704; but the present development dates only from 1875, when the Niagara Power Canal was constructed. In 1901 the Ontario Power Company and the Niagara Power Company were established, and since then still other smaller companies have sprung into being. With the development of these arose the

danger that the natural beauty of Niagara might be destroyed or lessened. The amount of water that may be used for power purposes has accordingly been limited and by the terms of a treaty concluded between the United States and Great Britain, the total amount of water that may be diverted for power purposes is 56,000 cubic feet per second, of which Canada may have 36,000 cubic feet and the United States 20,000.

There is a belief that half the water passing into Lake Erie from the upper lakes does not go over the falls, but finds its way into Ontario through a subterranean channel. The actual current is sufficiently enormous, however, and steadily wearing away the rocks over which it descends, it has during the past ages excavated the gorge of the lower rapids. There is no doubt the first location of the great cataract was on the face of the terrace near Lewiston, and it has gradually retired by the eating away, year after year, of the rocky ledges over which the waters pour. This, however, has not been done in a hurry, for the geologists studying the subject estimate that it has required nearly 37,000 years to bring the falls from Lewiston back to their present location. Nature moves slowly, indeed, though with the force of a Niagara she moves inexorably.

CHAPTER VI

FAMOUS BATTLEFIELDS OF FREEDOM

THE FIRST GREAT BATTLEGROUND OF THE REVOLUTION—WHERE WASHINGTON AND THE PATRIOTS WERE WELL TESTED—THE TURNING POINT OF THE CIVIL WAR.

ACROSS THE Charles River, north from the Shawmut peninsula of Boston is Charlestown, and the crowning glory of Charlestown is the Bunker Hill Monument, marking the greatest historical event of Boston, the famous battle fought June 17, 1775, when the British stormed the Yankee redoubt on the hilltop north of Charles River, which was then open country, but long ago became surrounded by the buildings of the expanding city, excepting the small space of the battlefield, now reserved for a park around the monument. The granite shaft rises 221 feet, upon the highest part of the eminence.

The provincial troops had assembled in large numbers north and west of Boston, mainly in Cambridge to the westward, and hearing that the British intended to occupy Bunker and Breed's Hills, in Charlestown, a force was sent under Colonel William Prescott, a veteran of the old French war, in the night, to fortify Bunker Hill. Upon crossing over, they hastily decided that it was better to occupy Breed's Hill, which, while part of the same ridge, was nearer Boston, and they constructed upon it a square redoubt. The British ships

in Charles River discovered this at daylight, and began a cannonade; American reinforcements were sent from Cambridge; and in the afternoon General Gage attacked. His onslaught was three times repulsed with heavy slaughter; then, the Americans' ammunition being spent, they could only resist with clubbed muskets and stones, and had to retreat.

Facing Boston, in front of the monument, the direction from which the attack came, is the bronze statue of Prescott, the broad-brimmed hat shading his earnest face, as, with deprecatory yet determined gesture, he uttered the memorable words of warning that resulted in such terrible punishment of the British storming column: "Don't fire until I tell you; don't fire until you see the whites of their eyes." The traces of the hastily constructed breastworks of the redoubt can be seen on the brow of the hill, and a stone shows where Dr. Joseph Warren fell, killed in the battle. He came to the fight as a volunteer, and had been made a general in the provincial army.

The top of the tall monument gives a splendid view in all directions over the harbor and suburbs of Boston, with traces of Mount Wachusett far to the westward, and on clear days a dim outline of the distant White Mountains. The corner-stone of the monument was laid by Lafayette on his American visit in 1825, and it was completed and dedicated in 1842, the oration on both occasions being delivered by Daniel Webster. One of his glowing passages thus tells the purpose of the monument:

"We come as Americans to mark a spot which must forever be dear to us and to our posterity. We wish

Photo by Brown Bros.

THE MEMORIAL OF A GREAT BATTLE. Bunker Hill Monument, in the northern section of Boston. It was on this hill on June 17, 1775, that the famous battle was fought so valiantly between the American patriots and the British troops of King George.

Pohto by William H. Rau

WHERE WASHINGTON LIVED IN VALLEY FORGE. This beautiful old house where Washington stayed during the trying winter of 1777-78 has been preserved along with other historic buildings, and about 475 acres of the original camp ground have been converted into Valley Forge Park.

that whosoever, in all coming time, shall turn his eye hither, may behold that the place is not undistinguished where the first great battle of the Revolution was fought. We wish that this structure may proclaim the magnitude and importance of that event to every class and every age. We wish that infancy may learn the purpose of its erection from eternal lips, and that weary and withered age may behold it and be solaced by the recollections which it suggests. We wish that labor may look up here and be proud in the midst of its toil. We wish that in those days of disaster which, as they come upon all nations, must be expected to come upon us also, desponding patriotism may turn its eyes hitherward, and be assured that the foundations of our national powers are still strong."

WHERE WASHINGTON AND THE PATRIOTS WERE WELL TESTED

As Boston cherishes Charlestown and Bunker Hill, so Philadelphia cherishes Valley Forge, a small village in Chester County, Pennsylvania, about twenty miles northwest of Philadelphia, for it was here amid intense suffering from cold, starvation and sickness that Washington and his half-clad army spent the frightful winter of 1777–78. On December nineteenth after the battles of Brandywine and Germantown and the occupation of Philadelphia by the British, the army, numbering about 10,000, went into camp here, the site having been selected by Washington partly because the army was thus placed between the British forces and York, Pennsylvania (about sixty-five miles west of Valley Forge), where Congress was in session. The camp was almost unap-

proachable from the west by reason of the precipitous hillsides and Valley Creek, a small stream flowing northward at their base into the Schuylkill River which afforded a barrier on the north; on the east a series of intrenchments and rifle-pits were built. In this vicinity the army remained encamped until the middle of June.

As a result of the mismanagement and general incapacity of the Commissary Department, the army received little food or clothing during the winter months; in the latter part of December nearly 2900 men were unfit for duty on account of sickness or the lack of clothing, and by February this number had increased to nearly 4000, a state of affairs which Washington said was due to "an eternal round of the most stupid mismanagement (by which) the public treasure is expended to no kind of purpose, while the men have been left to perish by inches with cold and nakedness." There were many desertions and occasional symptoms of mutiny, but for the most part the soldiers bore their suffering with heroic fortitude.

In 1893 the state of Pennsylvania created a commission of ten members, with power to purchase about 475 acres in Chester and Montgomery counties of the original camp ground. This tract is now known as the Valley Forge Park. Washington's headquarters were preserved, a picturesque old stone house built in about the year 1758, several other historic buildings were also kept and several bake-ovens and huts of the kind used by the army reproduced in order that visitors may as far as possible picture the camp exactly as it was during that distressing winter. Thousands of pilgrims visit

this honored spot every year and it is a favorite meeting ground for the Boy Scouts of the vicinity.

THE TURNING POINT OF THE CIVIL WAR

But of all cherished battlefields none probably means so much to Americans as that of Gettysburg, where at the beginning of July, 1863, was fought the most decisive battle of the Civil War. The field is seven miles north of the southern boundary of Pennsylvania and over forty miles from the Potomac River, for after the victory of Chancellorsville in May the Confederates determined to carry the war north into the enemy's country.

There are two parallel ridges bordering the plain on which Gettysburg stands—the long Seminary Ridge which stretches from north to south about a mile west of the town and gets its name from the Lutheran Theological Seminary located upon it, and the Cemetery Ridge to the south of the town which contains on its northern flat-topped hill the village cemetery. There is an outlying eminence called Culp's Hill farther to the east, making with the Cemetery Ridge, a formation bent around much like a fish-hook, with the graveyard at the bend and Culp's Hill at the barb, while far down at the southern end of the long straight shank, as the ridge extends for two miles away, with an intervening rocky gorge called the Devil's Den, there are two peaks, formed of tree-covered crags, known as the "Little Round Top" and the "Big Round Top." These long parallel ridges, with the intervale and the country immediately around them, are the battlefield. It covers about twenty-five square miles, and lies mainly southwest of the town.

THE GETTYSBURG MONUMENTS

As far as monuments go Gettysburg is better marked than probably any other battlefield in the world. Over a million dollars have been expended on the grounds and monuments. There are some five hundred monuments upon the field, placed with the utmost care in the exact localities, and executed in bronze, marble, granite, on boulders and otherwise. Marking-posts also designate the positions of the various organizations in the opposing armies.

To the north and west of Gettysburg is the scene of the first day's contest, but the more interesting part is to the south. Ascending the Cemetery Hill, there is passed, by the roadside, the house of Jenny Wade, the only woman killed in the battle, accidentally shot while baking bread. The rounded Cemetery Hill is an elevated and strong position having many monuments, and here, alongside the little village graveyard, the government established a National Cemetery of seventeen acres, where 3572 soldiers are buried, over a thousand being the unknown dead. A magnificent battle monument is here erected, surmounted by a statue of Liberty, and at the base of the shaft having figures of War, History, Peace and Plenty. This spot was the center of the Union line, then a rough, rocky hill. The cemetery was dedicated in November, 1863, Edward Everett delivering the oration, and the monument on July 1,1869.

LINCOLN'S IMMORTAL ADDRESS

At the cemetery dedication President Lincoln made the famous "twenty-line address" which is regarded as his most immortal utterance. He had been requested

to say a few words by way of dedication, and drawing from his pocket a crumpled piece of paper on which he had written some notes, he spoke as follows:

"Fourscore and seven years ago our fathers brought forth upon this continent a new Nation, conceived in liberty and dedicated to the proposition that all men are created equal. Now we are engaged in a great civil war, testing whether that nation or any nation, so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We are met to dedicate a portion of it as the final resting-place of those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this. But, in a larger sense, we cannot dedicate, we cannot consecrate, we cannot hallow this ground. The brave men, living and dead, who struggled here, have consecrated it far above our power to add or detract. The world will little note, nor long remember, what we say here, but it can never forget what they did here. It is for us, the living, rather to be dedicated here to the unfinished work that they have thus far so nobly carried on. It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to the cause for which they here gave the last full measure of devotion—that we here highly resolve that the dead shall not have died in vain —that the nation shall, under God, have a new birth of freedom, and that government of the people, by the people, for the people, shall not perish from the earth."

A mile across the valley is Lutheran Seminary, the most conspicuous landmark of the Confederate line, and to the southeast of this is Culp's Hill, strewn with rocks

and boulders and covered with trees. The Emmitsburg road goes southward down the valley, gradually diverging from the Union line, and crossing the fields that were the battleground on the second and third days. It is bordered by numerous monuments, some of great merit, and leads to the Peach Orchard, where the line bends sharply back. Peach trees are replanted here as the old ones fall. The Wheat Field is alongside, now grass-grown. Beyond it the surface goes down among the crags and broken stones of the Devil's Den, a ravine through which flows a stream, coming from the orchard and wheat field, and separating them from the rocky Round Tops, the sandstone cliffs of the Little Round Top rising high above the ravine. The fields sloping to the stream above the Den are known as the Valley of Death. Among these rocks there are many monuments, made of the boulders that are so numerous.

A toilsome path mounts the Big Round Top beyond, and an Observatory on the summit gives a good view over almost the entire battlefield. This summit, more than three miles south of Gettysburg, has tall timber, preserved as it was in the battle. There are cannon surmounting the Round Tops, representing the batteries in action. Across the valley to the west is the long fringe of timber that masked the Confederate position on Seminary Ridge. The lines of breastworks are maintained, and to the north is the little umbrella-shaped grove of trees at which Pickett's charge was directed. The Twentieth Massachusetts regiment brought here a huge conglomerate boulder from New England and set it up as their monument.

Along the Confederate line on Seminary Ridge to the northwest of Gettysburg is marked where General Reynolds fell, just within a grove of trees, and an equestrian statue of him has been erected on the field. From his untimely death, Reynolds is regarded as the special Union hero of the battle, as Armistead was the Southern. Near by a spirited statue, the "Massachusetts Color-Bearer," holds aloft the flag of the Thirteenth Massachusetts regiment, standing upon a slope, thus marking the spot where he fell at the opening of the conflict.

Such is the broad and impressive scene of one of the leading battles of the world, and the greatest ever fought in America. But happily the problems which there wrought such havoc have long been settled, and in 1913 veterans from both North and South met together at Gettysburg to commemorate in peace and friendship the great battle that had been waged there fifty years before.

CHAPTER VII

THE CITY BEAUTIFUL

THE NATION'S CAPITAL — CAPITOL HILL AND ITS BUILDINGS—THE LIBRARY OF CONGRESS—OTHER PUBLIC BUILDINGS—WHERE PAN-AMERICANS CONGREGATE —THE CORCORAN ART GALLERY—SMITHSONIAN INSTITUTION — WASHINGTON MONUMENT — BELOVED MT. VERNON.

ONE OF THE most stately domes in the world is that of the national Capitol at Washington and its perfect site on a hilltop dominating the city shows the great advantage which Washington enjoys above other cities in having been intelligently planned before its buildings were erected instead of afterward. The Capitol is indeed the crowning glory of Washington, both literally and figuratively. The noble dome surmounted by a colossal statue of America may be seen from far and near no matter in what way one approaches the city.

The striking thing about Washington is that, unlike other capitals of great nations, it was created for the sole purpose of a seat of government, apart from any question of commercial rank or population. After the adoption of the Federal Constitution there was a protracted conflict in Congress over the claims of rival localities for the seat of government, but it was finally decided that Philadelphia should remain the capital for ten years, while after the year 1800 it should be located on the Potomac River, on a site selected by Washington.

Photo by Brown Bros.

WHERE MEMORIES GATHER. General Warren's statue on Little Round Top, Gettysburg. On November 19, 1863, the field of Gettysburg, where one of the most decisive battles of the Civil War was fought, was consecrated as a national soldiers' cemetery, and it was then that President Lincoln made his famous address.

Photo by William H. Rau.

WHERE THE STRANGER ENTERS WASHINGTON. The beautiful Union Station is a fit entrance to the beautiful capital of the nation

within a district of one hundred square miles, ceded by Maryland and Virginia, to be under the exclusive jurisdiction of Congress. The location was at the time nearly in the geographical center of the thirteen original states. The capital was originally called the "Federal City," but this was changed by law in 1791 to the "City of Washington." The corner-stone of the Capitol was laid in 1793, its front facing east upon the elevated plateau of the hill, and the town was, according to the original designer, to have been built mainly upon this plateau. Behind the Capitol, on its western side, the brow of the hill descended rather sharply, and here they laid out a wide and open Mall, westward over the lower ground to the bank of the Potomac River, more than a mile away. Off toward the northwest, at the end of one of the diagonal avenues, they placed the Executive Mansion, with its extensive park and gardens stretching southward to the river.

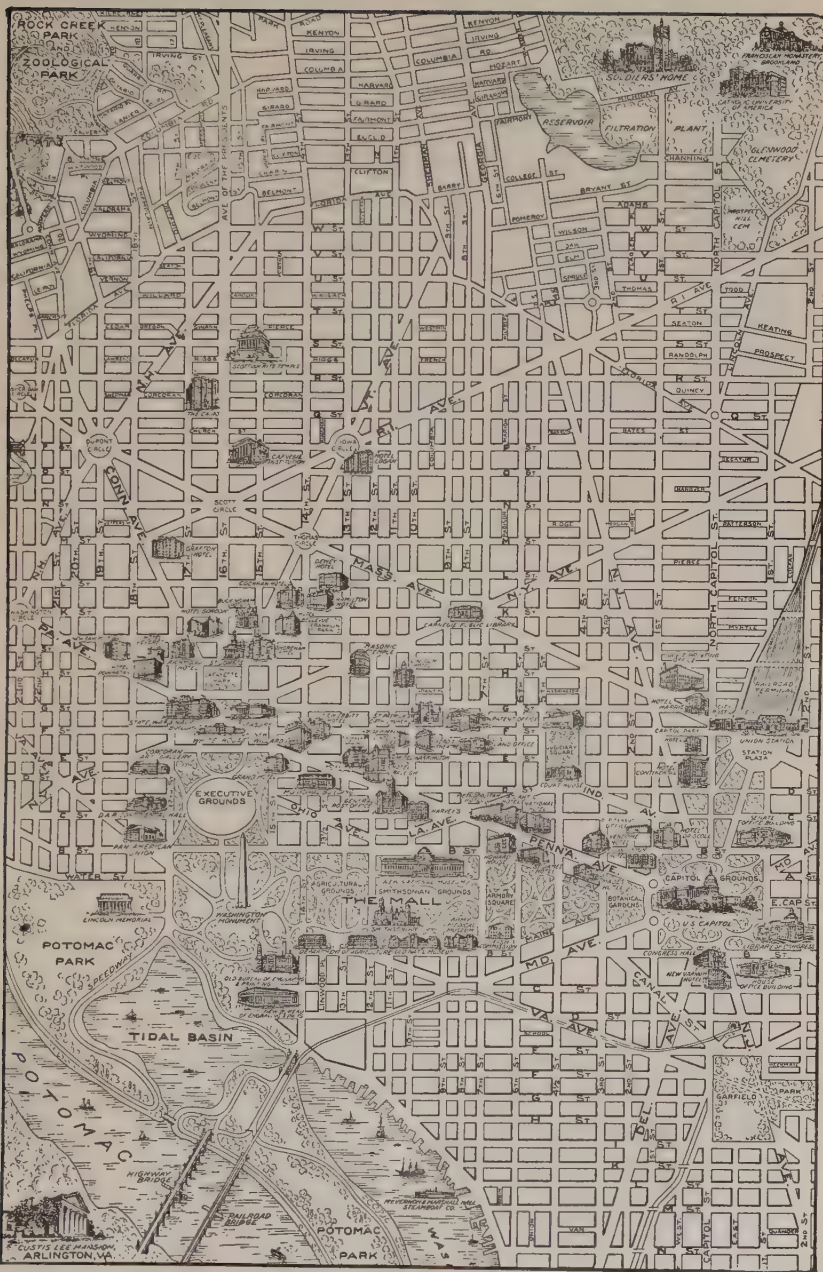
The design was to have the city in an elevated and salubrious location, with the president secluded in a comfortable retreat amid ample grounds in the suburbs. But few plans eventuate exactly as expected; and the people, when they came to the new settlement, would not build the town on Capitol Hill as had been intended, but persisted in settling upon the lower ground along and adjacent to the broad avenue leading from the Capitol to the Executive Mansion; and there, and for a long distance beyond the latter to the north and west, lies the city of Washington today. Pennsylvania Avenue, 160 feet wide, joining these two widely separated Government establishments and extending far to the northwest, thus became the chief street of the modern city.

CAPITOL HILL AND ITS BUILDINGS

After the British burned the original Capitol in 1814 it was rebuilt, being completed in 1827. In 1851 the growth of Congress demanded an extension, and it is this extension which supplied the wings and dome that has made the building so attractive architecturally. This massive government palace stretches over 750 feet along the top of the hill, a huge impressive white pile, noble in its simplicity. The architecture is classic, with Corinthian details, and, to add dignity to the western front, which overlooks the city, a marble terrace has been constructed at its base on the crest of the hill, which is approached by two broad flights of steps. The Capitol is surrounded by a park of about fifty acres, including the western declivity of the hill and part of the plateau on top. Upon this plateau, on the eastern front, vast crowds assemble every fourth year to witness the inauguration of the president.

The rotunda is the most striking feature of the Capitol interior. It is nearly one hundred feet in diameter, and rises 180 feet to the ceiling of the dome, which is ornamented with fine frescoes by Brumidi. Paintings on the walls represent events in the early history of the country. Away up in the top of the dome there is a Whispering Gallery, to which a stairway laboriously leads.

The old halls of the Senate in the original wings of the Capitol are now devoted to the Supreme Court and those of the House to a gallery of statuary. Beyond, on either hand, are the extensive new wings—the Senate Chamber to the north and the Representatives' Hall to the south. Each is surrounded by corridors, beyond which are committee rooms, and there are spacious gal-



WASHINGTON AND ITS BUILDINGS. The plan of the city, with its avenues radiating from the Capitol, is here well shown. (79)

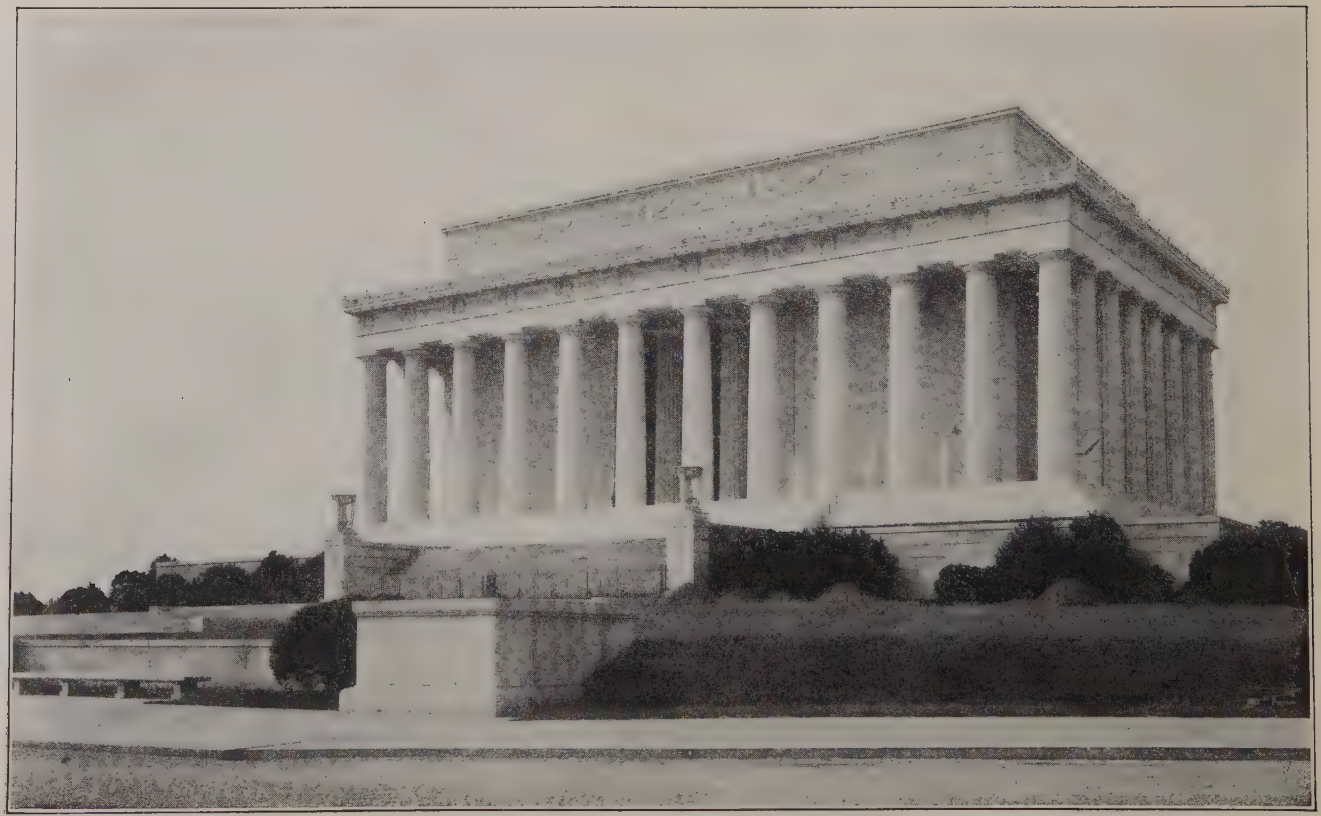
leries for the public. Each member has his chair and desk, the seats being arranged in semicircles around the rostrum. Close to the Senate Chamber is a gorgeous "Marble Hall" in which senators give audience to their visitors, and magnificently decorated apartments for the president and vice-president.

THE LIBRARY OF CONGRESS

Close to the Capitol lies the Congressional Library and to many persons this is the most interesting of all the public buildings, containing as it does a vast store of artistic as well as literary wealth. It stands on the plateau southeast of the Capitol and is an enormous structure—a quadrangle inclosing four courts and a central rotunda. It was finished in 1897 and cost over six million dollars. The book-stacks contain accommodations for about four million and a half volumes.

The style of the library is Italian Renaissance modified, and the material is Concord granite on the exterior and enameled brick within the courts. The framework is steel. Within the walls are incased and decorated wholly by stucco and marble. There is rich sculpture and mosaic work throughout and symbolic mural paintings, the work of some of the most brilliant artists America has produced. One could, indeed, spend many days seeing the Library of Congress and still not see all its beauty. Yet even the chance visitor must remember the splendid bronze doors of Olin T. Warner and Frederick Macmonnies, the H. O. Walker paintings of Lyric Poetry, the Walter McEwen paintings of subjects from Greek mythology, the J. W. Alexander paintings of "The Evolution of the Book," the Elihu Vedder

THE HOME OF THE NATION'S CHIEF. With the exception of the Capitol itself the White House is the oldest public building in Washington. John Adams was the first president to make his home here.



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THE LINCOLN MEMORIAL. The renowned structure on the banks of the Potomac, one of the most beautiful buildings in the world. It was dedicated by the late President Harding in 1922.

decorations embodying the idea of government, Simmons' "Muses," the Pompeiian panels of George W. Mayward, Gari Melchers' "War" and "Peace," Kenyon Cox's "Arts" and "Sciences," the Vedder mosaic of Minerva, the rotunda statues of Bela L. Pratt, and the glorious dome frescoes of E. H. Blashfield, personifying the great nations of history. In the canopy of the dome, above and within the collar, Blashfield has also painted, as if floating in the sky, an exquisitely graceful female figure, called Human Understanding, who lifts her veil and gazes up, as if seeking more and more guidance from on high. Two cherubs attend her, carrying the Book of Knowledge.

The practical work of the library concentrates in the rotunda, where (in the center) stands the circular desk of the superintendent and his assistants, who can speedily communicate with all parts of the building by a system of telephones, and by pneumatic tubes, which carry messages and orders for books to any required room or book-stack. The floor is filled with small desks, arranged in concentric circles and separated by light screens or curtains, and the intrusion of mere sight-seers is forbidden. Unlimited light and air are assured, and quiet is enforced; while celerity in obtaining and distributing books is secured by various devices that librarians elsewhere admire and copy.

OTHER PUBLIC BUILDINGS

The "White House," like the older part of the Capitol, is constructed of Virginia freestone, and painted white. It stands within a park at some distance back from the street, a semi-circular driveway leading up to the Ionic

colonnade supporting the front central portico. The grounds stretch down to the Potomac River, which flows about two hundred yards below its southern front. It is two stories high, about 170 feet long, and eighty-six feet deep. This building, like the Capitol, was burned in the British invasion of 1814 and afterwards restored. It is a comfortable mansion, though rigid in simplicity. The East Room is the finest apartment, occupying the whole of the eastern side, and is kept open for visitors during most of the day. The public wander through it awaiting the President's coming to his almost daily reception. It is an impressive room and in earlier times was the scene of various inauguration feasts when presidents kept open house.

A corridor leads westward from the East Room, through the center of the White House, to the conservatories, which are prolonged nearly two hundred feet farther westward. A series of fine apartments, called the Green, Blue and Red Rooms, from the predominant colors in their decorations, are south of this corridor, with their windows opening upon the gardens. These apartments open into each other, and finally into the State Dining Hall on the western side of the building, which is adjoined by a conservatory. North of the corridor the first floor contains the family rooms, and on the second floor are the sleeping-rooms and also the public offices. The Cabinet Room, in the center of the building, is a comparatively small apartment, where the Cabinet officers assemble around a long table. On one side of it, at the head of a broad staircase, are the offices of the secretaries, over the East Room; and on the other side, the President's private apartment, which is called

the Library. Here the President sits, with the southern sun streaming through the windows, to give audience to his visitors, who are passed in by the secretaries.

To the east of the White House is the Treasury Building, extending over five hundred feet along Fifteenth Street, enriched by a magnificent Ionic colonnade, modeled from that of the Athenian Temple of Minerva. Each end has an elaborate Ionic portico, while the western front, facing the White House, has a grand central entrance. This was the first great building constructed for a Government department, and is the headquarters of the secretary of the treasury.

Upon the western side of the White House is the most splendid of all the department buildings, accommodating the State, War and Navy Departments. It is Roman Doric, built of granite, four stories high, with Mansard and pavilion roofs and porticoes. The Salon of the Ambassadors, or the Diplomatic Reception Room, is its finest apartment, and is the audience chamber of the secretary of state, who occupies the adjoining Secretary's Hall, also a beautiful room. This great building is constructed around two large interior courts, the Army occupying the northern and western wings, and the Navy the eastern side, where among the great attractions are the models of the famous warships of the American Navy.

WHERE PAN-AMERICANS CONGREGATE

Of the most recently constructed buildings in Washington the Pan-American is the most interesting as well as the most beautiful. Its wonderful glass-covered court, sixty feet square, the sunken gardens, beautiful statuary

and artistic grounds are the admiration of every visitor. The building is conducted by the twenty-one republics of North, South and Central America for the development of Pan-American commerce and friendship. Its construction cost was one million dollars, one-fourth being paid by the American republics and three-fourths by Andrew Carnegie.

THE CORCORAN ART GALLERY

Near the White House is the Corcoran Art Gallery, known around the world because of its valuable collections. It is an attractive building, amply endowed by the late banker, William W. Corcoran, whose fortune was laid when he had the pluck to take a government loan which seemed slow of sale.

The style of the building is Neo-Greek, and the external walls above the granite basement are of marble, white, pure and brilliant. Below the elaborately carved cornice runs a frieze bearing the names of eleven famous sculptors and painters. Original marbles, bronzes, rare paintings, and casts and replicas from the finest specimens of antique and modern sculpture, fill the rooms and line the corridors.

SMITHSONIAN INSTITUTION

In Washington's Farewell Address, issued in 1796, there occurs the phrase, "An institution for the increase and diffusion of knowledge," and it was well known that the Father of his Country cherished a project for a national institution of learning in the new Federal City. This was evidently communicated to James Smithson, an Englishman, by one of his intimates in Paris, Joel

Photo by William H. Rau

READING ROOM OF CONGRESSIONAL LIBRARY. Under the dome of the vast, high-walled reading room three hundred students can work easily at one time. The book-stack of the library are a quarter of a mile distant from the Senate and House of Representatives, but the buildings are connected by a tunnel, through which runs an endless cable, by means of which any book needed for reference by a member of Congress can be in his hands in three minutes.

Photo from Underwood & Underwood, N. Y.

THE CAPITOL AT WASHINGTON VIEWED FROM THE AIR. An unusual picture of the National Capitol, taken from an aeroplane. In the foreground is the Senate Office Building.

Barlow, a noted American, who was familiar with Washington's plan, and in this way originated the residuary bequest, which was contained in the following clause of Smithson's will: "I bequeath the whole of my property to the United States of America, to found at Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men."

The ornate building of red Seneca brownstone which stands upon the Mall was designed in 1847 and finished in 1855. Its grand front stretches about 450 feet, and its nine towers and turrets rise from seventy-five to 150 feet. This, the original building, contains a museum of natural history and anthropology. In connection with it there is another elaborate structure over three hundred feet square—the National Museum—containing numerous courts, surrounding a central rotunda, beneath which a fountain plashes. This is under the same management, and directly supported by the Government, the design being to perfect a collection much like the British Museum, but paying more attention to American antiquities and products. This adjunct museum began with the gifts by foreign Governments to the Philadelphia Centennial Exposition in 1876, most of them being still preserved there. The Smithsonian Trust Fund now approximates one million dollars, and there are various other gifts and bequests held in the Treasury for various scientific purposes similarly administered.

THE DEPARTMENT OF AGRICULTURE

Down near the Potomac, on the Mall, to the west of the Smithsonian turrets, is the extensive brick and

brownstone building representing the dominant industry of the United States, which gives the politicians so much anxiety in catering for votes—the Agricultural Department. Here are spacious gardens and greenhouses, an arboretum and herbarium, the adjacent buildings also containing an agricultural museum. As over three-fifths of the men in the United States are farmers and farm-workers, and many others are in the adjunct industries, it has become a popular saying in Washington that if you wish to scare Congress you need only shake a cow's tail at it.

WASHINGTON MONUMENT

Behind the Agricultural Department, and rising almost at the river bank, and in front of the Executive Mansion, is the noted Washington Monument, its pointed apex elevated 555 feet. This is a square and gradually tapering shaft, constructed of white Maryland marble, the walls fifteen feet thick at the base and eighteen inches at the top, the pyramidal apex being fifty-five feet high and capped with a piece of aluminum. A fatiguing stairway of nine hundred steps leads to the top, and there is also a slow-moving elevator. From the little square windows, just below the apex, there is a superb view over the surrounding country. Afar off to the northwest is seen the long hazy wall of the Blue Ridge or Kittatinny Mountain range, its prominent peak, the Sugar Loaf, being fifty miles distant. To the east is the Capitol and its surmounting dome, over a mile away, while the city spreads all around the view below, like a toy town, its streets crossing as on a chess-board, and cut into gores and triangles by the broad, diagonal

avenues lined with trees. Coming from the northwest the Potomac passes nearly at the foot of the monument, with Arlington Heights over on the distant Virginia shore, and the broad river channel flowing away to the southwest.

BELOVED MT. VERNON

There are many interesting trips to be taken from Washington, chief among which is that to the home of George Washington at Mt. Vernon, about seventeen miles below the city on the Potomac, a noble old mansion standing among trees at the top of a bluff about two hundred feet above the river. As the steamboat approaches its bell is solemnly tolled, for this is the universal custom in nearing or passing the tomb of this first great American. It originated in the reverence of a British officer, Commodore Gordon, who, during the invasion of the capital in August, 1814, sailed past Mount Vernon, and as a mark of respect for the dead had the bell of his ship, the "Sea Horse," tolled.

The steamboat lands at Washington's wharf at the foot of the bluff, where he formerly loaded his barges with flour ground at his own mill, shipping most of it from Alexandria to the West Indies. The road from the wharf leads up a ravine cut diagonally in the face of the bluff, directly to Washington's tomb, and beside the ravine are several weeping willows that were brought from Napoleon's grave at St. Helena. Washington's will directed that his tomb should be built of brick, and it is a plain square structure, with a wide arched gateway in front and double iron gates. Above is the inscription on a marble slab: "Within this enclosure rest the

remains of General George Washington." The vault is about twelve feet square. It has upon the floor two large stone coffins, that on the right hand containing Washington, and that on the left his widow Martha, who survived him over a year. In a closed vault at the rear are the remains of numerous relatives, and in front of the tomb monuments are erected to several of them. No monument marks the hero, but carved upon the coffin is the American coat-of-arms, with the single word "Washington."

The road at the top of the bluff reaches the mansion, a long wooden house, with an ample porch facing the river. It is built with simplicity, two stories high, and contains eighteen rooms, with a small surmounting cupola for a lookout.

As may be supposed this interesting building is filled with relics. The most valuable of all of them hangs on the wall of the central hall, in a small glass case shaped like a lantern—the key of the Bastille—which was sent to Washington, as a gift from Lafayette, shortly after the destruction of the noted prison in 1789. In sending it Lafayette wrote: "It is a tribute which I owe as a son to my adopted father; as an aide-de-camp to my general; as a missionary of liberty to its patriarch."

The Washington relics are profuse—portraits, busts, old furniture, swords, pistols and other weapons, camp equipage, uniforms, clothing, books, autographs and musical instruments, including the old harpsichord which President Washington bought for two hundred pounds in London, as a bridal present for his wife's daughter, Eleanor Parke Custis, whom he adopted. There is also an old armchair which the Pilgrims brought over in the

Mayflower in 1620. In the banquet-hall, which is one of the wings Washington added, is an elaborately-carved Carrara marble mantel, which was sent him at the time of building by an English admirer, Samuel Vaughan. Rembrandt Peale's equestrian portrait of Washington with his generals covers almost the entire end of this hall. Here also is hung the original proof-sheet of Washington's Farewell Address. Upstairs is the room where Washington died; the bed on which he expired and every article of furniture is preserved, including his secretary and writing-case, toilet-boxes and dressing-stand. Just above this chamber, under the peaked roof, is the room in which Mrs. Washington died.

As one wanders through the old house and looks down from the majestic heights over the sweeping river that Washington loved so well, one is filled with deep and impressive thoughts; and an intenser love wells up in one's heart for the brave Father of his Country who left this peaceful estate to serve the needs of the new-born nation.

THE LINCOLN MEMORIAL

Commenced in 1914 and dedicated on Memorial Day, 1922, the Lincoln Memorial, in Potomac Park, Washington, has been pronounced the "supreme gem of buildings." It is in the form of a Greek temple and stands on the axis of the Capitol and the Washington Monument. Within is a seated statue of the Great Emancipator; on the walls are Lincoln's Gettysburg Speech and the second inaugural address. As seen from the top of the Washington Monument the Lincoln Memorial presents a picture that cannot be forgotten.

CHAPTER VIII

THE CONFEDERATE CAPITAL

RICHMOND OF YESTERDAY AND TODAY—CAPTAIN JOHN SMITH AND "NONE SUCH" LAND—CAPITAL OF THE CONFEDERACY — THE STATE CAPITOL — OTHER HISTORIC PLACES.

FROM THE earliest colonial times the history of Virginia, and especially Tidewater Virginia, including Richmond and its vicinity, has, by great events and great men, been prominently connected with every important era in the growth and development of the country. This is amply attested by the landmarks on every side—its battlefields, its historic buildings, and its monuments. The visitor is almost bewildered by their number.

CAPTAIN JOHN SMITH AND "NONE SUCH" LAND

No less a person than the celebrated Captain John Smith, associated forever with the romantic story of the Indian princess, Pocahontas, may be considered the projector of Richmond, for in May, 1607, shortly after the landing of the English settlers at Jamestown, he with Captain Newport and others ascended the James River as far as the place where Richmond now stands. In September, 1609, Smith, who was the president at Jamestown, again ascended the river to find a better location for the colony than Jamestown. He purchased from the Indians some land near the present site of

Richmond, and so pleased was he with the place that he called it "None Such."

The city has a delightful situation. The James River flows around a curve from the northwest to the south, and pours over little cascades among a maze of diminutive islands. There are on the northern bank two or three large hills and several smaller ones, and Richmond is built upon these, as Rome upon her seven hills. The State Capitol and a broad white penitentiary crown two of the highest. The town was founded at the falls of the James in 1737, and the capital of Virginia was moved here from Williamsburg in 1779, when there was only a small population.

CAPITAL OF THE CONFEDERACY

The place did not have much history, however, until it became the capital of the Confederacy, and then the strong efforts made to capture it and the vigorous defense gave it world-wide fame. Beginning in 1862 it was made an impregnable fortress, and its fall, when the Confederate flank was turned in 1865 through the capture of Petersburg, resulted from General Lee's retreat westward and his final surrender at Appomattox. When Lee abandoned Petersburg there was a panic in Richmond, with riot and pillage; the bridges, storehouses and mills were fired, and nearly one-third of the city burned. It has since, however, been rebuilt in better style, and has extensive manufactures and a profitable trade.

THE STATE CAPITOL

The center of Richmond is a park of twelve acres, surrounding the Capitol, a venerable building upon the

summit of Shockoe Hill, and the most conspicuous structure in the city. It was built just after the American Revolution, the plan having been brought from France by Thomas Jefferson, and modeled from the ancient Roman temple of the *Maison Carrée* at Nismes, the front being a fine Ionic portico. From the roof, elevated high above every surrounding building, there is an excellent view, disclosing the grand sweep of the river among the islands and rapids, going off to the south, where it disappears among the hills behind Drewry's Bluff, below the town. The square-block plan with streets crossing at right angles is well displayed, and the abrupt sides of some of the hills, where they have been cut away, disclose the high-colored, reddish-yellow soils which have been so prolific in tobacco culture, and give the scene such brilliant hues, as well as dye the river a chocolate color in times of freshet. The city spreads over a wide surface, and has populous suburbs on the lower lands south of the James.

This Capitol was the meeting-place of the Confederate Congress. It contains the battle-flags of the Virginia troops and other relics, and in a gallery built around the rotunda are hung portraits of the Virginia governors and of the three great military chiefs, Lee, Johnston and Jackson. Upon the floor beneath is Houdon's famous statue of Washington, made while he was yet alive, and regarded as the most accurate reproduction of Washington existing. A statue of Henry Clay and a bust of Lafayette are also in the rotunda.

On the esplanade north of the Capitol is Crawford's bronze equestrian statue of Washington upon a massive granite pedestal, one of the most attractive and elaborate

Photo by Brown Bros.

MOUNT VERNON, BELOVED OF AMERICANS. Washington was devotedly fond of this stately old house, a typical Virginia mansion, built on an estate granted to his grandfather by England in 1670. Here he retired to end his days, "cultivating the affections of good men."

Richmond Chamber of Commerce.

THE LEE MONUMENT AT RICHMOND. One of the finest types of equestrian statues is that of General Robert E. Lee, located in what is known as Lee Circle, on Monument Avenue, Richmond, Va.

bronzes ever made. The horse is half thrown upon his haunches, giving the statue exceeding spirit, while upon smaller pedestals around stand six heroic statues in bronze of Virginia statesmen of various periods—Patrick Henry, Thomas Jefferson, Thomas Nelson, George Mason, Andrew Lewis and John Marshall—the whole adorned with appropriate emblems. In the center of the esplanade is Foley's bronze statue of Stonewall Jackson, sent from London in 1875 by a number of his English admirers as a gift to the state of Virginia. It is of heroic size, standing upon a pedestal of Virginia granite, and is a striking reproduction. The inscription is: "Presented by English gentlemen as a tribute of admiration for the soldier and patriot, Thomas J. Jackson, and gratefully accepted by Virginia in the name of the Southern people." Beneath is inscribed in the granite the remark giving his sobriquet which was made at the first battle of Bull Run in 1862, where Jackson commanded a brigade. At a time when the day was apparently lost, his troops made so firm a stand that some one, in admiration, called out the words that became immortal: "Look, there is Jackson standing like a stone wall!"

OTHER HISTORIC PLACES

A short distance from the Capitol is the Confederate "White House," a square-built dwelling, with a high porch in the rear and a small portico in front. Here lived Jefferson Davis during his career as president of the Confederacy. It is now a museum of war relics. Near by is St. Paul's Episcopal Church, where Davis was attending service on the eventful Sunday morning in April, 1865, when he was brought the fateful telegram

from General Lee which said that Richmond must be immediately evacuated. In the central part of the residential quarter, on Franklin Street, is the plain brick house which during the Civil War was the home of General Lee. It is related that after the Appomattox surrender, when he returned to this house, the people of Richmond conceived the idea that he and his family were suffering for the necessaries of life, and so generous were the gifts poured in that the upper parts of the house were filled with barrels of flour, meats, etc., and the supplies became so bountiful that Lee directed their distribution among the poor.

A fine equestrian statue of General Lee was erected on Park Avenue in 1890 and there are various other monuments and places of historic interest. The "first house," a low stone cabin on Main Street, is believed by many to have been occupied by the Indian Powhatan, though it was probably constructed after his time. In St. John's Church, built in 1740, the first Virginia Convention listened to Patrick Henry's impassioned speech: "Give me liberty or give me death!" Under the shadow of the adjoining Libby Hill was the famous Libby Prison of the Civil War, one chapter of the history of the city that one would rather forget. Altogether Richmond is a vast treasure house of relics sacred to both North and South, because the North has come to respect the "Lost Cause" and to honor her great-hearted leaders.

CHAPTER IX

WHERE STEEL IS KING

A CITY OF SUPERLATIVES—PITTSBURGH DEVELOPMENT —ARTISTIC BUILDINGS—MAMMOTH INDUSTRIES—THE SMOKY CITY.

LIKE NEW YORK, Pittsburgh is a city of superlatives. Its sky-line is not so interesting; its rivers not so busy; but its skyscrapers and smokestacks are forever fascinating to the artist, and the products of its vast iron and steel industries are carried far and wide throughout the earth.

Pittsburgh lies in the midst of the most productive coal fields in the country, and the region is also rich in petroleum and natural gas. Factories extend for miles along the three rivers at the junction of which the city has grown up, and indeed far back into the tributary valleys, earning for it the nickname of "The Smoky City." Yet Pittsburgh is not without natural beauty, for all about it are picturesque rolling plateaus and the valleys of the rivers are narrow with high hills or precipitous bluffs. The ugly and depressing flatness of the country surrounding Chicago are not here.

Few Americans, except those living in Pittsburgh, know that the city is one of historic interest, owing its origin, indeed, to the strategic value of its site in the struggle between the English and the French for the possession of the North American continent. A few Frenchmen

attempted to establish a settlement here in 1731, but were soon driven away by the Indians. In 1753, after the French had laid formal claim to this region and the Ohio Land Company had been formed with a view to establishing a settlement within it, Robert Dinwiddie, governor of Virginia and a shareholder in the Ohio Company, sent George Washington with a letter to "the commandant of the French forces on the Ohio" (then stationed at Fort Le Bœuf, near the present Waterford, about 115 miles north of the head-waters of that river) asking him to account for his invasion of territory claimed by the English. This was Washington's first important public service. He reached the present site of Pittsburgh, November 24, 1753, and subsequently reported that what is now called "The Point," *i.e.* the tongue of land formed by the confluence of the Monongahela and Allegheny Rivers, was a much more favorable situation for a fort and trading post than the one about two miles down the Monongahela (near the present site of McKees Rocks) which had been tentatively selected by the Ohio Company. Accordingly, on February 17, 1754, a detachment of about forty soldiers, under the command of Captain William Trent, reached "The Point," and began to build a fortification which was the beginning of the permanent settlement here.

PITTSBURGH DEVELOPMENT

After the long succession of wars and massacres on that frontier had ceased, the village laid out around the fort grew, and business began developing—at first, boat- and vessel-building, and then smelting and coal mining and the manufacture of glass. In 1812 the first rolling-mill

THE CONFEDERATE "WHITE HOUSE." This building, now a museum of precious relics, was the home of Jefferson Davis during his presidency of the Confederacy

Detroit Publishing Co.

"The Point" Pittsburgh. A picturesque view of the great city on the Allegheny and Monongahela Rivers, described by its Chamber of Commerce as "the world's workshop."

started, and the war with England in that year caused the opening of a cannon foundry, which became the Fort Pitt Iron Works. The village of Fort Pitt had become Pittsburgh, and expanded vastly with the introduction of steam, and it became an extensive steamboat builder for the Western waters. Railroad connections gave it renewed impetus; natural gas used as a manufacturing fuel was a wonderful stimulant; and the city now conducts an enormous trade with all parts of the world.

This wonderful industrial development all came within the nineteenth century. There is still preserved as a relic of its origin the little block-house citadel of the old Fort Pitt, down near the point of the peninsula where the rivers join. This has been restored by the Daughters of the American Revolution—a small square building with a pyramidal roof. The surrounding stockade long ago disappeared. There is in the City Hall an inscribed tablet from Fort Pitt bearing the date 1764. The old building, which was the scene of Pittsburgh's earliest history, for it stands almost on the spot occupied by Fort Duquesne, is among modern mills and storehouses, about three hundred feet from the head of the Ohio.

ARTISTIC BUILDINGS

Pittsburgh, after an almost exclusive devotion to manufacturing and business, began some years ago to cultivate artistic tastes in architecture, and has some very fine buildings. There is an elaborate Post-office and an interesting City Hall on Smithfield Street; but the finest building of all, and one of the best in the country, is the magnificent romanesque Court House, occupying a prominent position on a hill adjoining Fifth Avenue.

There is a massive jail of similar architecture, and a "Bridge of Sighs" connects them, a beautifully designed arched and stone-covered bridge, thrown for a passage-way across an intervening street. There are attractive churches, banks and business buildings, and eastward from the city, near Schenley Park, is the beautiful Carnegie Library and Museum in Italian Renaissance, with a capacity for two hundred thousand volumes, a benefaction of Andrew Carnegie. The residential section is mainly on the hills east of Pittsburgh and across the Allegheny River in Allegheny City.

MAMMOTH INDUSTRIES

But the great Pittsburgh attraction is the multitude of factories that are its pride and create its prosperity. Some of these are among the greatest in the world—the Edgar Thomson Works and Homestead Works of the U. S. Steel Corporation, the Duquesne Steel Works, the Keystone Bridge Company, the Westinghouse Electric Company, and others. The Keystone Bridge Company works cover seven acres, and have made some of the greatest steel bridges in existence, and the Westinghouse Electric Company manufacture the greatest dynamos, including those of the Niagara Power Company. The production of pig-iron in the Pittsburgh district in 1912 was ten million tons, and the production of steel eleven million, in each case about one-third of the total output in the United States.

THE SMOKY CITY

To look down from the hills upon the city's belching smokestacks and steam-jets and the lurid glow of its

furnaces and to hear steam hissing, whistles screeching, bells ringing and forges and trip-hammers pounding, is to imagine a veritable pandemonium below. To many of the workers no doubt it is little less than that, but to the man who loves his city and admires the big things she is doing, it is very much more.

CHAPTER X

THE QUEEN OF THE GREAT LAKES

CHICAGO, A CITY OF ENDLESS ENTERPRISE—REALIZING IDEALS — LAKE MICHIGAN AND ITS MOODS — "THE LOOP" — THE STOCKYARDS — THE GREAT CENTRAL MARKET—CHICAGO AS A SUMMER RESORT—A CITY AT PLAY—A TWENTIETH-CENTURY UNIVERSITY—THE CIVIC CENTER.

HALF THE population of the country lives within one night's ride of Chicago, and the "Windy City" is before everything else a great market, the natural distributing point of the continent, the center of the country's sources of demand and supply. Here people from every state in the Union gather to buy and sell, and from here as a center the mighty railroads of America radiate. Situated at the head of the Great Lakes, Chicago has occupied a strategic position in the movement of water and rail commerce. Its population in 1837 was only 4170, but in 1880 it had grown to more than half a million, and to-day has a population of about three million people.

"This will be the gate of empire, this the seat of commerce," predicted La Salle in 1682. "Everything invites to action. The typical man who will grow up here must be an enterprising man. Each day as he rises he will exclaim, 'I act, I move, I push,' and there will be spread before him a boundless horizon, an illimitable field of activity. A limitless expanse of plain is here—to the

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GIRDLING THE EARTH WITH STEEL. A steel beam, red-hot, drawn out 90 feet long in a huge steel mill in Pittsburgh. Steel rolled here may find its place as part of a skyscraper in the Babel of New York, be builded into the framework of a vessel in the shipyards of San Francisco, or help to construct a railroad into the heart of China.

Photo by Hallenbeck

FACING THE BLUE MICHIGAN. Chicago may well be proud of Grant Park, which is being made by filling in the Lake, and of Michigan Avenue, with its fine hotels, Art Institute, Orchestra Hall and Public Library. The tall building in the foreground is the Blackstone Hotel; the low building at the right, the Art Institute.

east water and all other points, land. If I were to give this place a name I would derive it from the nature of the man who will occupy this place—*ago*, I act; *circum*, all around—'Circago.' "

Whether the present name Chicago is, as is maintained in Gale's *Reminiscences of Early Chicago*, an Indian modification of La Salle's "Circago," or whether it owes its derivation to some other source, is a matter today of small concern, but certain it is that the city is a place of endless enterprise and achievement.

REALIZING IDEALS

And though it is the commercialism of Chicago that impresses the passing tourist more than anything else, Chicago is also a city of high civic ideals with a rich artistic and intellectual life and a spirit of open-mindedness as boundless as the prairies upon which the bustling city miraculously arose. Social workers all over the country look to Jane Addams and Hull House for inspiration and method; students travel far to study in the great Art Institute, and municipalities everywhere examine with interest the "Chicago Plan," which provides for the future growth of the city in an orderly and systematic way. This plan is the realizable dream of a "City Beautiful," worked out by hard-headed business men and providing a solution of Chicago's problems of transportation, street congestion, recreation and public health.

Even today Chicago has achieved big things in her civic life. She is known as the healthiest of all the large cities; she has the smallest public debt of any municipality in the country; she has the best system of

small parks and boulevards, and she has above all a firm faith in the future and a devotion to the needs of the coming generations that is little short of religious. Chicago has provided:

"That what will come, and must come, shall come well."

LAKE MICHIGAN AND ITS MOODS

The traveler from the East where city streets are narrow and cluttered is impressed by the open spaces, trim boulevards and parks minus "Keep off the Grass" signs; the traveler from the West by the endless din and smoke and the general grayness of the city. Both realize something of what Lake Michigan means to Chicago—cool breezes, healthful climate, unfailing water supply, and physical beauty. To be sure, railroad tracks now clutter the water's edge, but the City Plan includes the improvement of the lake front by the creation of a continuous park from Wilmette to Jackson Park, and even railroad tracks cannot spoil the beauty of the lake itself—blue, magically blue, when the sun shines, and like the ocean when the wind ruffles it into whitecaps and sends waves pounding in along the shore, and again all gray on cloudy days, lake and sky and city melting into a somber monochrome not without charm for him who has eyes to see it.

"THE LOOP"

The South Side, the North Side, the West Side, and "the Loop" are all distinct sections of the city, and one must understand their meaning in order to understand conversation with a Chicagoan. The West Side comprises all territory west of the north and south branches

of the Chicago River and east of the north branch; the South Side all territory south of the Chicago River and east of the south branch. This embraces the Loop district, which, strictly speaking, is the territory within the Elevated Railway loop, but the term is in reality applied to the entire downtown business district, extending from about Twelfth Street on the south to the Chicago River on the north, and from the south branch of the river on the west to Grant Park on the east. The intersection of State and Madison Streets in this district is approximately the center of the shopping district, and is the most crowded street crossing, streams of pedestrians and vehicles passing in almost solid masses.

THE STOCKYARDS

On the South Side are the vast Union Stock Yards, the most spectacular of Chicago's industries, through which every year some eight million hogs, four million cattle, and four million sheep pass, over two-thirds of the hogs and cattle being killed in the yards and sent away in the form of meat. The whole annual traffic is valued at $250,000,000. The yards cover three hundred acres, and with the packing-houses employ about 25,000 men, and they have twenty miles of water-troughs and twenty-five miles of feeding-troughs, and are served by 250 miles of railway tracks. The Union Stock Yards make a complete town, with its own banks, hotels, board of trade, post-office, town-hall, newspaper and special fire department. The extensive inclosure is entered by a modest, gray sandstone turreted gateway, surmounted by a carved bull's head, emblematic of its uses. The Horse Market is a large

pavilion, seating four thousand people. From this vast emporium, with its enormous packing-houses, are sent away the meat supplies that go all over the world, the product being carried out in long trains of canned goods and refrigerator cars, the most ingenious methods of cold storage being invented for and used in this widely extended industry.

THE GREAT CENTRAL MARKET

Chicago is the world's greatest grain and lumber as well as cattle market, and the natural metropolis of the Middle West. The active traffic of the grain and provision trades is conducted in the building of the Board of Trade, a tall and imposing structure at the head of La Salle Street, making a fit close to the view along that grand highway. It is one of the most elaborate architectural ornaments of the city, and its surmounting tower rises 322 feet from the pavement. The interior is a magnificent hall, lighted by high-reaching windows and surmounted by a central skylight. Upon the spacious floor, between nine and one o'clock, assemble the wheat and corn, and pork, lard, cattle and railway kings in a typical scene of concentrated and boiling energy, feeding the furnace in which Chicago's high-pressure business enterprise glows and roars. These speculative gladiators have their respective "pits" or amphitheaters upon the floor, so that they gather in huge groups, around which hundreds run and jostle, and with their calls and shouting make a deafening uproar. Here fortunes are made and unmade, for the Board of Trade has been the scene of some of the wildest speculative excitements in the country.

CHICAGO AS A SUMMER RESORT

But for all its bustle Chicago is the coolest of the big cities and to many a visitor from the lakeless regions to the west and south it is a summer resort of endless charm. Nearly twenty-four miles of lake frontage, including some excellent bathing beaches, are within the city limits, and in all the larger parks there are artificial lakes for rowing and other sports. Boulevards connecting the various parks tempt one to automobiling; pleasure steamers ply on the lake; and there are tennis courts, baseball fields and golf courses in many of the city pleasure grounds. For the more serious-minded summer visitor the University of Chicago, the Art Institute, and other institutions offer the same opportunities for study as in the winter.

A CITY AT PLAY

The broad expanse of prairie upon which the city arose was low, level and treeless originally, but abundant trees have since been planted, and art has made little lakes and miniature hills, beautiful flower-gardens and abundant shrubbery, thus producing pleasure-grounds of rare attractions. Michigan Avenue and Drexel and Grand Boulevards, leading to the southern system of parks and the Lake Shore Drive on the north side of Chicago River, are the finest residential streets. The huge Auditorium fronting on Michigan Avenue includes a hotel and theater and is surmounted with a tower rising 270 feet, giving a fine view over the city and lake. In front is Grant Park containing the Art Institute. Michigan Avenue begins at Chicago River beside the site of old Fort Dearborn, now obliterated, and it

stretches far south, a tree-lined boulevard with beautiful residences.

A TWENTIETH-CENTURY UNIVERSITY

On the Midway Plaisance between Washington and Jackson Parks on the South Side is the University of Chicago, endowed by John D. Rockefeller, a great popular institution, which many men and women all over the country honor as their Alma Mater. The Gothic buildings of gray limestone, built in quadrangles, are very pleasing and some of them very beautiful reproductions of famous English university structures. The Mitchell Tower, for instance, whose chimes, a memorial to Alice Freeman Palmer, lend so large a charm to the daily routine, is a reproduction of Magdalen Tower, Oxford, and the University Commons, Hutchinson Hall, a duplicate of Christ Church Hall, Oxford. There are faculties of arts, literature, science, divinity, medicine, law, education, and commerce and administration. The astronomical department, the famous Yerkes Observatory, is located at Williams Bay, Wisconsin.

THE CIVIC CENTER

The university is in many ways allied with the highest civic interests of the city and has given inspiration to many of its progressive reforms, among which the Chicago Plan has already been mentioned. A most interesting part of this plan is the conception of a civic center, to be established at the intersection of South Halsted and West Congress Streets, a location expected to be the center of population at that time. The center will include a group of beautiful city, county and federal

buildings, and from here boulevards will radiate to the far corners of the city and to its outlying districts. Chicago is indeed building for the future—for a city of added millions and extended enterprise—for the Chicago of tomorrow.

CHAPTER XI

IN THE LAND OF SUNSHINE

FLORIDA OF ORANGE GROVES AND FLOWERS—THE OLDEST CITY IN THE UNITED STATES—THE AMERICAN RIVIERA—MYSTERIOUS REGION OF THE EVERGLADES.

TO THE winter tourist Florida spells springtime and flowers and sunny warm weather; for while the North and West are having zero temperature, while blizzards rage and railroads are blocked by snowdrifts, there are signs of summer's coming throughout Florida. "The flowers appear on the earth; the time of the singing of birds is come"; and orange blossoms are flinging their redolent perfume to the air. During mid-winter, indeed, the trucking fields are at their height of activity; strawberries and oranges are being shipped out of the state; and in many places roses, poinsettias and hibiscus are putting forth their brilliant blooms.

THE OLDEST CITY IN THE UNITED STATES

Florida has the distinction of containing the oldest city in the United States, founded on the seacoast by Menendez in 1565, and still in many ways preserving the characteristics of a Spanish town of the sixteenth century. The permanent population of St. Augustine is very meager, but in winter thousands of visitors from the North flock to this ancient place in search of warm weather.

The town is built on a level sandy plain, and the older

An Avenue of Palms in Florida. Land of tropical foliage, of majestic cocoanut palms, of oleanders, Australian firs, bananas and sago palms, of the royal poinciana, with its roses of many hues, and of the flaming hibiscus—no wonder Florida has become one of the winter playgrounds of America.

HARPER MEMORIAL LIBRARY. The buildings of the University of Chicago are uniformly English Gothic, making the campus, though less beautiful naturally than that of some other universities, one of appealing charm. The library is a memorial to the beloved President Harper.

streets are only a few feet wide and without sidewalks. The projecting balconies of some of the ancient houses almost touch those opposite. The old streets are paved with coquina and the old houses are built of it, a curious shell-limestone, quarried on Anastasia Island, that hardens upon exposure to the air. A few streets running north and south, crossed by others at right angles, and a broader front street bordered by the sea-wall which makes a fine promenade, compose the town. This sea-wall of coquina is capped with granite, and was built after the American occupation of the city. At its northern end is Fort Marion and at the southern end St. Francis Barracks, the United States military post, so named because it occupies the site of the old Convent of St. Francis, having some of its coquina walls incorporated in the present structure. The harbor in front, which in past centuries sheltered so many Spanish fleets and those of Spanish enemies as well, is now chiefly devoted to yachting.

When Menendez and his Spaniards first landed they built a wooden fort commanding the harbor entrance, surrounded by pine trees, which they named San Juan de Pinos. This was afterwards replaced by Fort San Marco, constructed of coquina, which was nearly a hundred years building, and was finished in 1756. Upon the transfer of Florida to the United States this became Fort Marion. It is a well-preserved specimen of the military architecture of the eighteenth century, built on Vauban's system, covering about four acres, with bastions at the corners, each protected by a watch-tower, and is surrounded by a moat.

There are other quaint structures in this curious old

town. A gray gateway about ten feet wide, flanked by tall square towers, marks the northern entrance to the city, the ditch from the fort passing in front of it. In one of the streets is the palace of the Spanish governors, since changed into a post-office. The official center of the city is a public square, the Plaza de la Constitucion. This square fronts on the sea-wall, and alongside it and stretching westward is the Alameda, known as King Street, leading to the group of grand hotels that have made modern St. Augustine so famous. These are the Ponce de Leon, the Alcazar and the Cordova, with the Casino, amid beautiful gardens. These buildings reproduce types of Spanish-Moorish architecture, with many suggestions from the Alhambra.

THE AMERICAN RIVIERA

All along the Atlantic shore of Florida south of St. Augustine are popular winter resorts, the most famous of which is Palm Beach. It is situated upon the narrow strip of land between the long and narrow lagoon of Lake Worth and the Atlantic Ocean and is reached by automobile from Jacksonville or by rail or through the East Coast Canal by boat. Here are the vast Hotel Royal Poinciana and the Palm Beach Inn, with their cocoanut groves, which also fringe for miles the pleasant shores of Lake Worth. Prolific vegetation and every charm that can add to this American Riviera bring a crowded winter population. Here grows the Poinciana, a tree bearing gorgeous flowers, and the two magnificent hotels are surrounded by an extensive tropical paradise, and connected by a wide avenue of palms a half-mile long, one house facing the lake and the other the ocean.

MYSTERIOUS REGION OF THE EVERGLADES

Off to the westward the distant horizon is bounded by the mysterious region of the Everglades, dismal haunts of the alligator and crocodile. The Everglades are really a lake, about eight thousand square miles in area, in which are numerous half-submerged islands. The floor of the lake is a limestone basin, extending from Lake Okechobee in the north to the extreme southern part of the state, and the lake varies in depth from one to twelve feet, its water being pure and clear. No streams empty into the Everglades, but the water-supply is furnished by springs and precipitation. There is a general southeasterly movement of the water.

The soil of the islands is very fertile and is subject to frequent inundations, but gradually the water area is being replaced by land and the state is doing splendid work in reclaiming much of this waste area. The land reclaimed, moreover, has been found exceedingly fertile and particularly adapted to raising sugar-cane, oranges and garden truck.

The vegetation in the Everglades is luxuriant, the live oak, wild lemon, wild orange, cucumber, papaw, custard apple and wild rubber trees being among the indigenous species; there are, besides, many varieties of wild flowers, including rare and lovely orchids. Systematic exploration has been prevented by the dense growth of saw grass, a kind of sedge, with sharp, saw-toothed leaves, which grows everywhere on the muck-covered rock basin and extends several feet above the shallow water.

CHAPTER XII

OF MARDI GRAS FAME

THE NEW-OLD CITY OF NEW ORLEANS—LATIN GAYETY—MARDI GRAS—RELICS OF FRENCH DAYS—THE ANCIENT CABILDO—THE ST. LOUIS CATHEDRAL—THE FRENCH MARKET—HOTEL ROYAL—THE FRENCH OPERA HOUSE—THE PLACE PREPARED FOR NAPOLEON—THE TWENTIETH CENTURY CITY.

NEW ORLEANS, the new-old city which has given allegiance to four different flags and has still a charming Latin atmosphere for all its modernity, is a place of unending interest, whether one loiters near a plashing fountain in one of the quaint walled gardens of the French Quarter or mingles with the crowd along the bustling levee besides the great Father of Waters. The city has in many respects become modernized, but modernism has not destroyed the French Opera, unique in America, the fascinating patios and courts or the ancient St. Louis Cathedral, fronting the Place d'Armes, where centered the social and religious life of the land that was an empire in itself and of the city whose history has been written in blood.

In enterprise New Orleans is American, but in spirit it is still largely Latin. The Spaniard, the Frenchman, the Mexican, the Cuban and the Central American inherently understand this spirit, because it is a part of them. The American from other parts of the United States notes in New Orleans a different atmosphere, in

Photo by Brown Bros.

MARDI GRAS RESPLENDENT. One of the principal floats in the famous Mardi Gras parade at New Orleans, passing the reviewing stand in front of the City Hall on Charles Street, where the Mayor presents the keys of the city to Rex, King of the Carnival.

Photo by Brown Bros.

FORT MARION IN THE OLDEST CITY OF THE UNITED STATES. The old eighteenth-century fort of San Marco (now Fort Marion) is one of the picturesque landmarks of St. Augustine.

which business sometimes pauses for pleasure and happiness is not subservient to money-getting.

LATIN GAYETY

The Carnival in New Orleans is not only marvelous for its richness and beauty, but it is a season when people of all classes enter into the spirit of fun and frolic, throw care to the winds, and yield themselves willing subjects to the gentle rule of "King Rex." Parades that cost thousands of dollars are featured for several days; magnificent balls, where the social leaders and distinguished people of all parts of the country assemble, and a great day when maskers claim the streets, make up the season, and give it a touch of splendor found nowhere else in the world. Thousands of strangers come to the city each year for the carnival and those who have participated in it once generally return to enjoy its pleasures again.

The Carnival season properly begins twelve nights after Christmas with the ball of the "Twelfth-night Revelers," and other exclusive organizations give their revels on stated nights until the Monday before Lent. On that Monday, King Rex arrives with royal magnificence on a big flotilla made up of war-ships and all types of river craft. He parades the streets in a golden car followed by soldiers, marines, blue-jackets and the lords and dukes of the realm in rich costume. The same night "Proteus" appears in the streets, coming out of the sea, with a brilliant pageant of from eighteen to twenty cars. Proteus concludes his parade with one of the great balls of the year at the French Opera House.

MARDI GRAS

The next day is Mardi Gras day—"Fat Tuesday" is the English of the name—and from early morning until dusk, maskers, who tax their ingenuity to find costumes striking and distinct, are in the streets. Rex's parade of dazzling cars is given Mardi Gras day and the maskers throw to the crowds in the streets souvenirs and trinkets. The day concludes with the pageant and ball of "Comus," and the pageant is generally one of the grandest of the season. At the ball at the French Opera House, Rex and Comus, with their beautiful queens, reign together.

The Carnival has been celebrated in New Orleans since the early thirties, but the first parade was not given until 1837. Comus is the oldest of the present organizations and was formed in 1857. While the smaller organizations give no parades, their revels at the French Opera House are made up of gorgeous tableaux. The organizations are of a most secret character and the members of the Krewes work for months in preparing their subjects. Until the day of the parade and ball the subject for the display is not made public.

RELICS OF FRENCH DAYS

There is, in the older town, so much of characteristic French and Spanish survival, that New Orleans is a most interesting and picturesque city, though it has not very much to show in the way of elaborate architecture. The streets have generally French or Spanish names, and there is a distinctive French Quarter inhabited by creoles, where the buildings have walls of adobé and stucco, inner courts, tiled roofs, arcades and balconies, the whole region being lavishly supplied with

semi-tropical plants. The chief business thoroughfare, Canal Street, is at right-angles to the river bank, and borders the French Quarter.

As the visitor wanders through Royal, Dauphine and Bourbon streets, and other thoroughfares of the "Vieux Carré," he notices a style of architecture with which he is entirely unfamiliar unless he has spent some of his time in the cities and towns of France and Spain.

Jackson Square, laid out by Bienville in 1720 and known as the "Place d'Armes," has been closely identified with the history of the city for nearly two hundred years, and one of the most romantic incidents connected with it was the reception given the Acadians who were driven out of Canada by the British. General Jackson was welcomed in the square after his victory over the British at Chalmette and conducted into the cathedral to the solemn Te Deum. The square was beautified first by Mme. Pontalba, daughter of Don Almonaster, who had it laid out French style. In 1846 the magnificent equestrian statue of General Andrew Jackson was placed in the square and the name changed to Jackson Square. Two long rows of three-story brick buildings were erected on either side the square by Mme. Pontalba in 1849. Her monogram is still intact on the iron railings. These buildings were once the home of fashionables, but today they house for the most part foreigners of the lower class. In the central building in St. Peter Street Jenny Lind lived.

THE ANCIENT CABILDO

The Cabildo, opposite Jackson Square, was erected by Don Almonaster in 1795 and its history reads like a

romance. It was the old Spanish court-house in the colonial days and there were many stirring dramas enacted in this building, but the only relic of medieval justice still preserved is the heavy set of iron-bound stocks. The transfer of Louisiana from Spain to France and from France to the United States took place in this building, and the spot where the officials stood is marked by a big brass plate.

THE ST. LOUIS CATHEDRAL

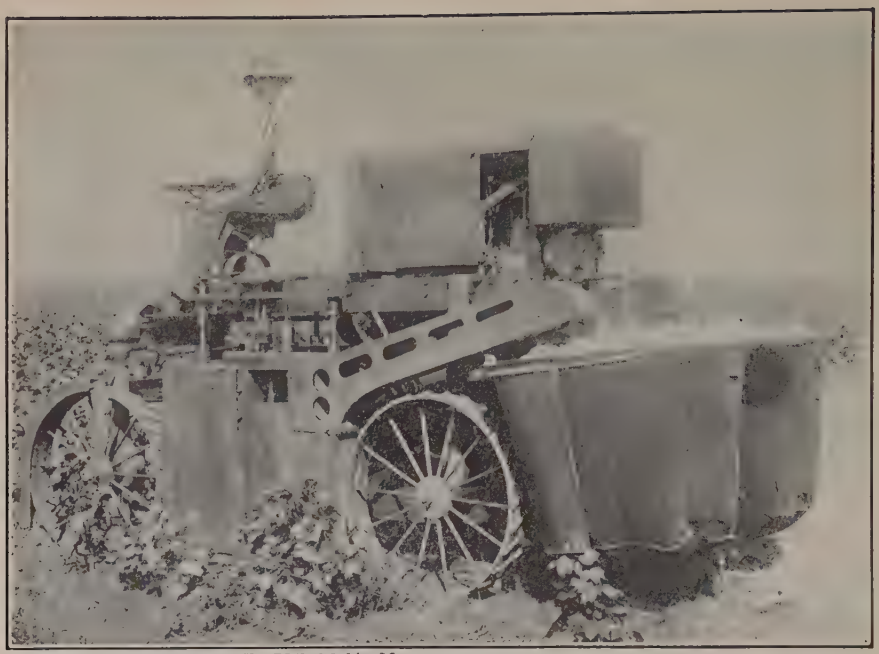
The St. Louis Cathedral, next to the Cabildo, ranks as one of the best-known churches in the United States. The site was selected by Bienville for a cathedral when the city was laid out in 1718, but it was not until 1724 that the first brick church was built. The church was destroyed in the fire of 1788 and in 1794 the present structure was built by Don Almonaster, previously mentioned as the donor of a chapel to the Ursuline nuns. The church was repaired and added to from time to time and is today firm and substantial. Don Almonaster is buried in a crypt under the altar. Other distinguished Frenchmen and Spaniards rest in the crypt and the slabs bearing the names of the dead are plainly to be seen in front of the altar rail. In the rear of the cathedral is a small garden in which many duels were fought in colonial times.

THE FRENCH MARKET

The French Market is just off Jackson Square and extends down to Barracks Street. The first market was erected on this site by the Spaniards in 1791 and remained intact until 1812 when it was destroyed by a hurricane.

Photo by Brown Bros.

UNDER THE PALMS AT HOTEL POINCIANA. Palm Beach is often called the "Millionaires' playground" and in some respects it rivals the resorts of the Mediterranean Sea because wealth has made of the surroundings a vast semi-tropical paradise.



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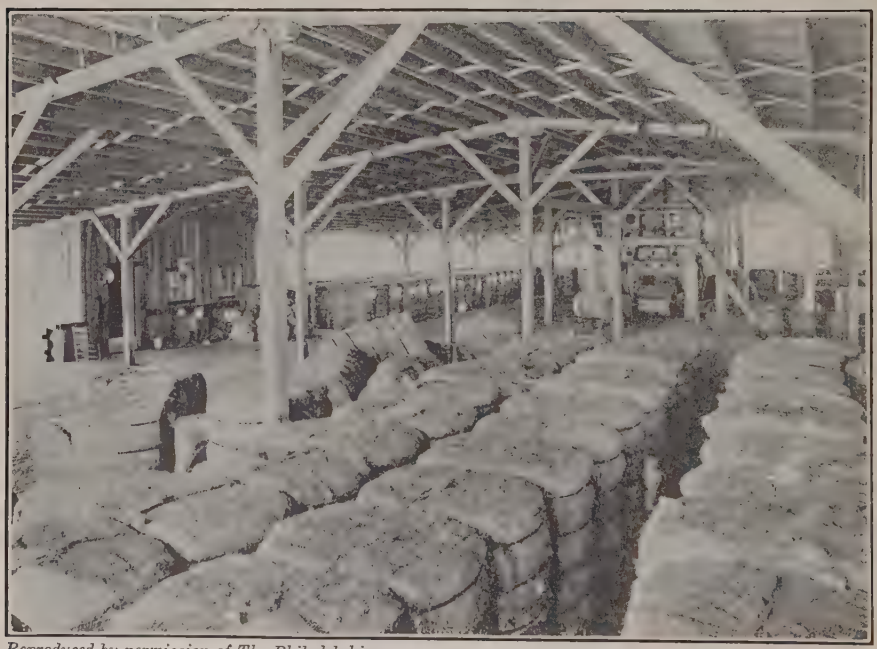
COTTON PICKER.



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COTTON PLATFORM AND COMPRESSOR. Experts have for many years been seeking a machine for picking cotton. The one illustrated above is an ingenious device which propels itself, picks the cotton, and stores it in the bags at the rear. In the lower view the machine seen in the background presses the cotton into bales, which are bound with steel tape.

The old structure was replaced by the present meat market in 1813. In 1822 the vegetable market was added and the Bazaar market was not erected until 1872. In the rear of the French Market and extending back several squares and taking in the area from St. Ann to Barracks Street is what is known as Little Italy. Thousands of Italians live in this section of the city and some of the tall dingy tenements have been the scenes of bloody Mafia crimes and Black-hand assassinations.

HOTEL ROYAL

The next point of interest is the Hotel Royal, first known as the St. Louis Hotel. It was erected in the early thirties and for many years was the leading hotel of the South, later becoming the Capitol, and again assuming its early character of hotel. The building is now falling into ruins and is occupied by poor families. Like many other venerable buildings in the city of ancient houses, the Hotel Royal has its weird ghost story. Henry Clay was entertained in the Hotel Royal in 1843, and the supper alone, which was served on gold plates, cost $20,000. In the rotunda of the hotel is the old slave block where negroes were once auctioned to the highest bidder.

THE FRENCH OPERA HOUSE

Bourbon Street has its famous buildings and the first of these structures that attracts attention is the "Old Absinthe House," built in 1798, and used as a café since 1825. Next comes the French Opera House known the world over. In this theater many world singers have been heard, among them Adelina Patti, who was once a

member of the company performing there, playing a very small part.

There are old buildings, some of them with fascinating courtyards, for a considerable distance down Bourbon Street, and in St. Peter Street, just off Bourbon, stood Tabary's theater, opened for its first performance in 1791.

THE PLACE PREPARED FOR NAPOLEON

All along Chartres Street are buildings with interesting histories, among them the old Orleans Hotel, built in 1799, and the Strangers' Hotel, erected a few years later. At 514 Chartres Street the story of the attempt to rescue Napoleon from St. Helena is still told by the concierge. It was the home of Girod, a wealthy merchant, who, with Dominic You, one of Lafitte's pirates, planned to make a sudden dash on St. Helena with a swift yacht and bear the imprisoned emperor to liberty. Girod fitted the house up magnificently to serve as the Emperor's home. The plot fell through when a sailing ship brought the news of the Little Corporal's death in 1821.

THE TWENTIETH-CENTURY CITY

But New Orleans has many things to recommend it to the tourist besides its picturesque French Quarter. In the first place, it is a modern city with every convenience and improvement—a part of the progressive twentieth century. It has magnificent hotels with charges graded to meet any purse; its restaurants rank among the finest in the world; it has smooth-paved streets, inviting driveways and beautiful parks, and one of the most up-to-date street car systems in the country.

The new city is of course above Canal Street, and the

great jobbing center is in Canal Street, while the wholesale district includes nearly all the streets close to the river from Canal to Julia Streets. In this district there are a number of big manufacturing plants. The office-building section from Camp to Baronne Streets is dotted with tall sky-scrapers and modern structures. In this section are located the Cotton Exchange, Stock Exchange, Board of Trade, Contractors' Exchange, Real Estate Exchange and most of the banks. The Sugar Exchange is below Canal Street close to the levee, where the sugar is landed at the publicly-owned docks.

New Orleans is the greatest sugar market and also one of the greatest rice and coffee markets, and the docks are always lined with ships discharging and taking on cargoes. Steamships to every port in the Atlantic call here, and to Panama, Central America and Mexico it is the way.

CHAPTER XIII

AMONG THE COTTON FIELDS

ATLANTA, THE METROPOLIS OF THE SOUTHEAST—CIVIL WAR MEMORIES—"MARCHING THROUGH GEORGIA"—THE CITY TODAY—SNOWY FIELDS OF COTTON.

THE COMMERCIAL center of the Southeast and the entrepôt of vast cotton industries, Atlanta and the Chattahoochee which runs by its dooryard are still not without picturesque interest. The Chattahoochee was the Indian "river of the pictured rocks." Its headstreams are in the Blue Ridge in northeastern Georgia, and flowing southwest and afterwards south, it forms the western boundary of the state. Then uniting with the Flint River, the two make the Appalachicola, which, crossing Florida, empties into the Gulf. The Chattahoochee in its course passes about seven miles from the Georgia capital, Atlanta, the "Gate City," and the chief Southern railway center. The city is situated on a hilly surface, elevated a thousand feet above the sea, and is laid out in the form of a circle around the Union Passenger Depot, which is the central point. The first house was built at this place in 1836, on an Indian trail to the crossing of the Chattahoochee, whither a railroad was projected, and for several years it was called, for this reason, Terminus, being afterwards incorporated as the town of Marthasville, named after the Georgia Gover-

nor Lumpkin's daughter. In 1845, the first railroads were constructed connecting it with the seaboard, and it soon became a tobacco and cotton mart, growing rapidly, and in 1847 being incorporated as the city of Atlanta, having about 2500 people.

CIVIL WAR MEMORIES

During the Civil War Atlanta was a leading center of supplies, and the geographical position of the city made it of vital importance to the Confederacy. General Sherman, in his advance southward from Chattanooga in the spring and early summer of 1864, steadily fought and outflanked the Confederates, until in July they fell back behind the Chattahoochee and took a line covering Atlanta. General Hood assumed command on July 17. Sherman crossed the Chattahoochee and then Hood retired to the intrenchments around the city. For several weeks there were maneuvers and battles around Atlanta, until near the end of August, when Sherman had got behind the city, cutting the railways supplying it. On the night of September 1, Hood evacuated Atlanta, and the next day Sherman entered.

"MARCHING THROUGH GEORGIA"

This capture sealed the doom of the Confederacy, although there were subsequent battles and movements around Atlanta until November. Then Sherman, reinforcing General Thomas at Nashville, and leaving him to take care of Hood, ran back all the surplus property and supplies to Chattanooga, broke up the railway, cut the telegraph behind him, burned Atlanta, and on November 15 started on his famous "March to the Sea," to cut the

Confederacy in two, capturing Savannah in December. The destruction of Atlanta was almost complete.

THE CITY TODAY

After peace came, however, the restoration of Atlanta was rapid and thorough, and it is now one of the most progressive and wealthy Southern cities. It is a railroad center from which fifteen lines radiate, and the United States government has recognized the city's inportance and accessiblity by establishing a regional bank here. There is no part of the South Atlantic or Gulf coasts which can not be reached by rail from Atlanta in eighteen hours and for this reason General Sherman declared that Atlanta would always be a strategic point in war and a commanding center in times of peace.

SNOWY FIELDS OF COTTON

Atlanta is the center of a vast cotton trade, for cotton is the staple agricultural product of Georgia. The vast cotton fields of the state are a beautiful and interesting sight, especially when there are Negro pickers on the ground—"studies in black and white." Cotton-picking is at once the most difficult and most expensive operation in cotton production, although the work is light and is effectually performed by women and even children as well as by men. It is paid for at the rate of from forty-five to fifty cents per hundred pounds, and the picking season averages a hundred days. Great efforts have been made to devise cotton-picking machines, but with no great success as yet.

CHAPTER XIV

A TRIP TO PANAMA

FIRST DREAMS OF A CANAL—THE UNITED STATES TO THE RESCUE—GIGANTIC OBSTACLES—MEETING ALL EMERGENCIES—A BATTLE WON.

AMERICA has captured the forces of Nature, harnessed the floods and made the desert bloom, builded gigantic bridges and arrogant skyscrapers and bored roadways through solid rock and beneath water, but the most spectacular of all spectacular accomplishments is the Panama Canal.

Some four centuries ago, Balboa, the intrepid, the persevering, led his little band of adventurers across the Isthmus of Darien, as it was then called, and leaving their protection, gave reign to his impatience by going on ahead and climbing alone, slowly and painfully, the continental divide, from which vantage point he discovered the world's largest ocean.

We are told that, later, gathering his followers, he walked out into the surf and with his sword in his right hand and the banner of Castile in his left gave the vast expanse of water its present name and claimed all the land washed by its waves as the lawful property of the proud country to which he owed allegiance.

The narrowness of the Isthmus naturally suggested the cutting of a waterway through it. It interposed between Atlantic and Pacific a barrier in places less than

fifty miles wide. To sail from Colon to Panama—forty-five miles as the bird flies—required a voyage around Cape Horn—some ten thousand miles. Yet it was nearly four centuries before any actual effort was made to construct such a canal.

In 1876 an organization was perfected in France for making surveys and collecting data on which to base the construction of a canal across the Isthmus of Panama, and in 1878 a concession for prosecuting the work was secured from the Colombian Government. In May, 1879, an international congress was convened, under the auspices of Ferdinand de Lesseps, to consider the question of the best location and plan of the canal.

The Panama Canal Company was organized, with Ferdinand de Lesseps as its president, and the stock of this company was successfully floated in December, 1880. The two years following were devoted largely to surveys, examinations and preliminary work. In 1889 the company went into bankruptcy, and operations were suspended until the new Panama Canal Company was organized in 1894.

THE UNITED STATES TO THE RESCUE

The United States, not unmindful of the advantages of an Isthmian Canal, had from time to time made surveys of the various routes. With a view to government ownership and control, Congress directed an investigation, with the result that the Commission reported on November 16, 1901, in favor of Panama and recommended the lock type of canal, appraising the value of the rights, franchises, concessions, lands, unfinished work, plans and other property, including the railroad of the

A Glimpse of Atlanta A section of the business district of the city where skyscrapers are rapidly making their way.

Photo by Brown Bros.

"Way Down South in De Fields ob Cotton." A cotton field, "white unto the harvest," is a very beautiful sight, and the sight of Negro pickers recalls memories of old plantation days.

new Panama Canal Company, at $40,000,000. An act of Congress approved June 28, 1902, authorized the President of the United States to acquire this property at this figure, and also to secure from the Republic of Colombia perpetual control of a strip of land not less than six miles wide across the Isthmus and the right to excavate, construct and operate and protect thereon a canal of such depth and capacity as would afford convenient passage of the largest ships now in use or as may be reasonably anticipated.

Later on a treaty was made with the Republic of Panama whereby the United States was granted control of a ten-mile strip constituting the Canal Zone. This was ratified by the Republic of Panama on December 2, 1903, and by the United States on February 23, 1904. On May 4, 1904, work was begun under United States control.

THE GREAT CANAL

The Isthmus of Panama runs east and west and the canal traverses it from Colon on the north to Panama on the south in a general direction from northwest to southeast, the Pacific terminus being twenty-two miles east of the Atlantic entrance. The principal features of the canal are a sea-level entrance channel from the east through Limon Bay to Gatun, about seven miles long, five-hundred-foot bottom width and forty-one-foot depth at mean tide. At Gatun the eighty-five foot lake level is obtained by a dam across the valley. The lake is confined on the Pacific side by a dam between the hills at Pedro Miguel, thirty-two miles away. The lake thus formed has an area of 164 square miles and a channel depth of not less than forty-five feet at normal stage.

At Gatun ships pass from the sea to the lake level, and vice versa, by three locks in flight. On the Pacific side there is one lowering of thirty feet at Pedro Miguel to a small lake fifty-five feet above sea level, held by dam at Miraflores, where two lowerings overcome the difference of level to the sea. The channel between the locks on the Pacific side is five hundred feet wide at the bottom and forty-five feet deep, and below the Miraflores locks the sea-level section, about eight miles in length, is five hundred feet wide at the bottom and forty-five feet deep at mean tide. Through the lake the bottom widths are not less than one thousand feet for about sixteen miles, eight hundred feet for about four miles, five hundred feet for about three miles, and through the continental divide from Bas Obispo to Pedro Miguel, a distance of about nine miles, the bottom width is three hundred feet. The total length of the canal from deep water in the Caribbean, forty-one-foot depth at mean tide to deep water in the Pacific, forty-five-foot depth at mean tide, is practically fifty miles, fifteen miles of which are at sea level.

GIGANTIC OBSTACLES

The greatest difficulty encountered in the excavation of the canal was due to slides and breaks which caused large masses of material to slide or move into the excavated area, closing off the drainage, upsetting steam shovels and tearing up the tracks. The greatest slide was at Cucaracha, and gave trouble when the French first began cutting in 1884. Though at first confined to a length of eight hundred feet, the slide extended to include the entire basin south of Gold Hill, or a length

of about three thousand feet. Some idea of the magnitude of these slides can be obtained from the fact that during the fiscal year 1910 of 14,921,750 cubic yards that were removed 2,649,000 cubic yards, or eighteen per cent, were from slides or breaks that had previously existed or that had developed during the year.

The one greatest undertaking of the whole excavation was the Culebra cut. Work had been in progress on this since 1880, and during the French control over 20,000,000 cubic yards were removed. On May 4, 1904, when the United States took charge, it was estimated that there was left to excavate 150,000,000 cubic yards. Some idea of the size of this big cut may be formed from the fact that this division has within its jurisdiction over two hundred miles of five-foot-gage track laid, about fifty-five miles of which is within the side slopes of the Culebra cut alone.

GATUN DAM

The great dam at Gatun is a veritable hill—7,500 feet over all, 2,100 feet wide at the base, 398 feet through at the water surface, and one hundred feet wide at the top, which is 115 feet above sea level. The dimensions of the dam are such as to assure that ample provision is made against every force which may affect its safety, and while it is made of dirt, a thing before unheard of, it is of such vast proportions that it is as strong and firm as the everlasting hills themselves.

Fluctuations in the lake due to floods are controlled by an immense spillway dam built of concrete. The front of the dam is the arc of a circle 740 feet long with fourteen openings which, when the gates are raised to

the full height, permit a discharge of 140,000 cubic feet per second. The water thus discharged passes through a diversion channel in the old bed of the Chagres River, generating, by an enormous electric plant, the power necessary for operating the locks.

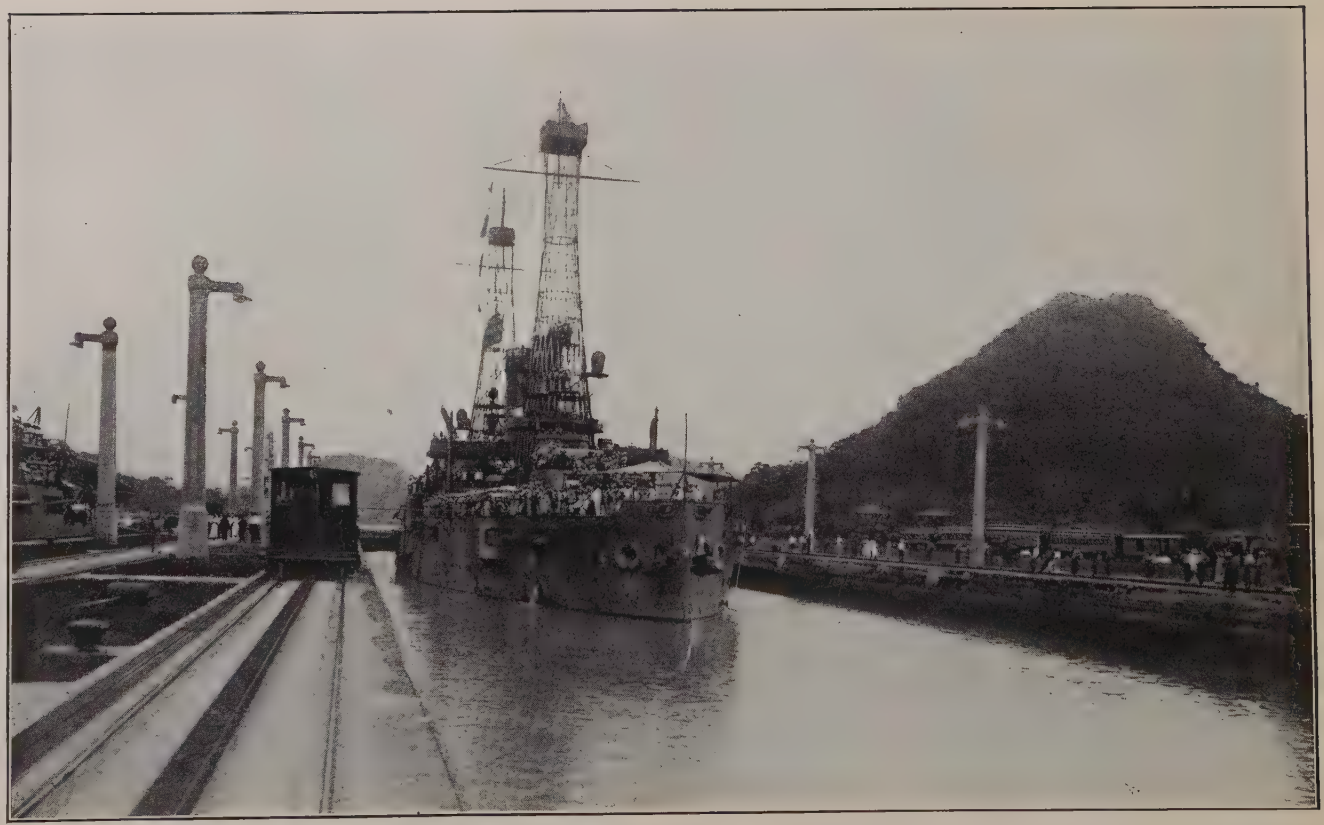
The locks of the canal are in pairs, so that if any lock is out of service navigation will not be interrupted; also, when all the locks are in use the passage of shipping is expedited by using one set of locks for the ascent and the other for descent. These locks are 110 feet wide and have usable lengths of one thousand feet. The system of filling adopted consists of a culvert in each side wall feeding laterals perpendicular to the access of the lock, from which are openings upward into the lock chamber. The entire lock can be filled or emptied in fifteen minutes and forty-two seconds when one culvert is used and seven minutes and fifty-one seconds using both culverts. It requires about ten hours for a large ship to make the entire trip through the canal.

MEETING ALL EMERGENCIES

Many extraordinary feats of engineering were accomplished to overcome the difficulties presented. Special contrivances, wonderful in their operation, were invented to meet exigencies and emergencies.

The first and greatest problem attempted by the United States was to make the Canal Zone healthful. This strip of land from ocean to ocean abounded in disease-breeding swamps and filthy habitations unfit for human beings. The death-rate was appalling and the labor conditions terrible. During the first two and a half years, therefore, all energies were devoted to ridding

Uncle Sam's Big Work at Panama. A bird's-eye view of the great canal, showing how the Atlantic and Pacific Oceans are here joined.



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MAN'S MIRACLE. A great battleship passing through the Panama Canal. The vessel is in the east chamber of the Pedro Miguel Locks. The electric locomotive used for drawing vessels through is shown on the left.

the Isthmus of disease by sanitation, to recruiting and organizing a working force and providing for it suitable houses, hotels, messes, kitchens and an adequate food supply. This work included clearing lands, draining and filling pools and swamps for the extermination of the mosquito, the establishment of hospitals for the care of the sick and injured and the building of suitable quarantine quarters. Municipal improvements were undertaken in Panama and Colon and the various settlements in the Canal Zone, such as the construction of reservoirs, pavements and a system of modern roads. Over two thousand buildings were constructed besides the remodeling of fifteen hundred buildings turned over by the French company.

It was only after all this preliminary sanitation was accomplished that the real work of digging the canal could go forward with any hope of success. These hygienic conditions had the result of making the Canal Zone one of the most healthful spots in the world and work on the canal became so popular that it was no longer necessary to enlist recruits from the West Indies, the good pay, fair treatment and excellent living conditions bringing thousands of laborers from Spain and Italy. The greatest number employed at any one time was 45,000, of which five thousand were Americans.

A BATTLE WON

The completion of this herculean task marked an epoch in the history of the world. A gigantic battle against floods and torrents, pestilence and swamps, tropical rivers, jungles and rock-ribbed mountains had been fought—and won! Well worthy a place in the halls of

immortal fame are the names of the thousands of sturdy sons who with ingenuity, pluck and perseverance never before equaled succeeded in making a pathway for the nations of the world from ocean to ocean.

This great and daring undertaking, which had for its object the opening up of new trade routes and lines of commerce, annihilating distance and wiping out the width of two continents between New York and Yokohama and making the Atlantic seaboard and the Pacific Coast close neighbors, is the climax of man's achievement and the greatest gift to civilization. It will help in the consummation of man's loftiest dreams of world friendship and world peace.

CHAPTER XV

THE CRADLE OF TEXAS LIBERTY

REMNANT OF SPANISH DAYS—THE SIEGE OF THE ALAMO—SAN ANTONIO OF THE MEXICANS—COWBOY LAND—A GROWING CITY.

EIGHTY MILES southwest of Austin is the ancient city of San Antonio, known as the "cradle of Texas liberty," a Spanish town upon the San Antonio and San Pedro Rivers, small streams dividing it into irregular parts, the former receiving the latter and flowing into the Gulf at Espiritu Santo Bay.

The Spaniards penetrated into this region in the latter part of the seventeenth century and established one of their usual joint religious-military posts among the Indians upon the plan of colonization then in vogue. The Presidio or military station was called San Antonio de Bexar, while during the early eighteenth century there were founded various religious missions, the chief being by Franciscan monks, the Mission of San Antonio de Valero. There are four other missions in and near the city, dating from that early period, their ancient buildings partly restored, but some of them also considerably in ruins. To the eastward of San Antonio River was built in a grove of the alamo or cottonwood trees in 1744 a low, strong, thick-walled church of adobe for the Franciscans, called from its surroundings, the Alamo.

THE SIEGE OF THE ALAMO

When the Texans revolted, they held San Antonio as an outpost with a garrison of 145 men, commanded by Colonel James Bowie, the famous duelist and inventor of the "bowie knife," who was originally from Louisiana. Bowie fell ill of typhoid fever, and Colonel Travis took command. Among the garrison was the eccentric David Crockett of Tennessee, who had been a member of Congress, and joined them as a volunteer. General Santa Anna marched with a large Mexican army against them, arriving February 22, 1836, and the little garrison retired within the church of the Alamo, which they defended against four thousand Mexicans in a twelve days' siege. The final assault was made at daylight, March 6, a lodgment was effected, and until nine o'clock a battle was fought from room to room within the church, a desperate hand-to-hand conflict at short range, not ceasing until every Texan was killed and 2,300 Mexicans had fallen. Upon the memorial of this terrible contest, at the Texas State Capitol, is the inscription:

> "Thermopylæ had her messenger of defeat, but the Alamo had none."

The modern San Antonio has a charm peculiarly its own. It is unlike the average American city of a hundred thousand people. Originally an old Spanish town, its winding streets are still rich in semi-tropical beauty, filled with deep, sharp shadows as reminiscent of Spain as are the quaint and lovely missions that line the Concepcion Road. The palm, the pomegranate, the crêpe myrtle, the stately century plant, the huisache, retama

Photo by Brown Bros.

THE THERMOPYLÆ OF AMERICA. The Alamo, historic chapel and ruins of former monastery in San Antonio, Texas, where the little band of Texas heroes died to a man fighting for liberty.

MORE PICTURESQUE THAN BEAUTIFUL. The Apaches, formerly one of the most powerful and warlike of the Indian tribes, are now confined to reservations in Arizona and New Mexico.

trees, giant live oak and pecans grow here, and sprinkled like emeralds through the city are plazas verdant with palms and ligustrums and flowers that bloom all winter long.

SAN ANTONIO OF THE MEXICANS

Old Spain has given way to Mexico today, and it is indeed impossible to think of San Antonio of the Americans without thinking of the San Antonio of the Mexicans, a hotbed of Mexican intrigue, with its "Revolutionary Row," its International Club, and its eternal talk of war. There are Mexicans of all classes on the streets, from the sun-browned men who peddle confections and hot tamales to the delicate women of higher birth who have been transported out of the tinder-box of Mexico into the haven of San Antonio, floating its blessed American flag.

COWBOY LAND

On the southern border of San Antonio are the extensive Fair Grounds, where Roosevelt's Rough Riders, largely recruited from the neighboring Texas ranches, were organized for the Spanish War in 1898. The most extensive Texas cattle ranches are south and west of San Antonio, the largest of them, King's Ranch, near the Gulf to the southward, covering 700,000 acres, and stocked with three thousand brood mares and a hundred thousand cattle.

A GROWING CITY

San Antonio is much more than a hotbed of insurrection and a center for the cattle country, however, for

the city is growing in industry and prestige, and is at present engaged in a comprehensive plan of public improvements. It is the distributing center for a large territory; has growing jobbing and manufacturing industries including cotton presses, oil mills, broom factories, flour mills, machine shops and foundries; and is also a tourist center and charming winter resort.

But insist as the citizen of San Antonio will that it is a big and coming city, it is the San Antonio of the past that we who visit love and wish to see unchanged down through the years—the city of crumbling Spanish architecture, the San Antonio of the Alamo, of loitering pedestrians, of intrigue and mystery, and of wailing, haunting, delicious Mexican music, a city unlike any other in the United States.

CHAPTER XVI

MORE BEAUTIFUL THAN THE SAHARA

ROMANCE OF THE SOUTHWEST—ANCIENT SANTA FÉ —INDIAN PUEBLOS—THE PETRIFIED FOREST—AZTEC RUINS AND HIEROGLYPHICS—THE PAINTED DESERT.

THERE IS NO country in all America so full of romantic interest as the great Southwest, a land of prodigious mountain terraces, extensive plateaus, profound canyons, and flat, arid plains, dotted with gardens of fruits and flowers, patched with vast tracts of pine timber, and veined with precious stones and metals, alternating with desolate beds of lava, bald mountainous cones of black and red volcanic cinder, grass-carpeted parks, uncouth vegetable growths of the desert, and bleak rock spires, above all which white peaks gleam radiantly in almost perpetual sunlight. The residents of this region are unable to shake off its charm, even when no longer compelled by any other consideration to remain, and the traveler finds it a novel environment for contemporaneous American life, this land of sage and mesquite, of shadowed canyons, lofty mesas and painted buttes. Its cliffs are flung in broad, sinuous lines that approach and recede from the way, their contour incessantly shifting in the similitude of caverns, corridors, pyramids, monuments, and a thousand other forms so full of structural idea that they seem to be the unfinished work of some giant architect who had planned more than he could execute.

The altitude of the railroad route through New Mexico and Arizona undulates between 5,000 and 7,000 feet above sea-level, until on the western border of Arizona the high plateaus break rapidly down to an elevation of less than 500 feet at the valley of a broad and capricious stream that flows through alternate stretches of rich alluvial meadow and barren rock-spires—obelisks rising against the sky. This stream is the Colorado River, wayward, strenuous, possessed of creative imagination and terrific energy when the mood is on. It chiseled the Grand Canyon, far to the north and east, and now complacently saunters oceanward.

The landscape is oriental in aspect and flushed with color. Nowhere else can you find sky of deeper blue, sunlight more dazzling, shadows more intense, clouds more luminously white, or stars that throb with redder fire. Here the pure rarefied air that is associated in the mind with arduous mountain climbing is the only air known—dry, cool and gently stimulating. Through it, as through a crystal, the rich red of the soil, the green of vegetation, and the varied tints of the rocks gleam always freshly on the sight.

One is borne past picturesque desert tracts spotted with sage, and past mesas, buttes, dead volcanoes and lava beds. These last are in a region where you will see not only mountain craters, with long basaltic slopes that were the ancient flow of molten rock, but dikes as well; fissures in the level plain through which the black lava oozed and ran for many miles. These vast rivers of rock, cracked, piled, scattered in blocks, and in places overgrown with chaparral, are full of interest, even to the accustomed eye. They wear an appearance of newness,

moreover, as if the volcanic action were of recent date; but there has been found nothing in native tradition that has any bearing upon them. Doubtless they are many centuries old.

ANCIENT SANTA FÉ

In this storied country, among scenic surroundings that reminded them of their Iberian home, the Spaniards built their City of the Holy Faith. Santa Fé was already well established when the Pilgrims landed at Plymouth, for about 1606, the annals say, Juan de Oñate, one of the Spanish conquistadores, founded his capital here on the site of the ruins of two small Indian pueblos. Every stranger visits the venerable shrine of San Miguel—a reminder of days of holy zeal and self-sacrificing stress. Inside of the church, which was partly burned during the Pueblo revolution of 1680 and restored in 1710 (as the inscription on one of the *vigas* just inside the ancient door details), is found a bell, cast in Spain more than a century before the discovery of America. The altar paintings lay claim to even greater age.

The Old Palace that faces the shady Plaza is another historic structure. Its massive walls are three hundred years old. They have withstood the ravages of time remarkably well. Recent repairs have revealed walls that antedate the Spanish construction—undoubtedly the remains of an ancient Indian ruin. Here have taken place historic gatherings innumerable. It has been occupied by a succession of almost one hundred governors —Spanish, Pueblo, Mexican and American—beginning before 1620 and ending with Governor George Curry in 1909. Some of these held sway over a region larger

than Germany or the original thirteen states. Here is the room in which Lew Wallace, when Governor of New Mexico, wrote a part of his great novel, *Ben Hur*. The New Mexico Historical Society has occupied the east end of the building for many years; it has a free museum filled with a varied collection of relics which speak eloquently of New Mexico's eventful past. The west end is the home of the Museum of New Mexico and the School of American Archæology, with its fascinating exhibits of specimens unearthed in the rich fields surrounding Santa Fé, whose ancient civilization succeeded one that was far more ancient.

The church of San Miguel, the Old Palace, the Old House where Coronado was said to have lodged in 1540, and other ancient shrines are not distinguishable from their surroundings by any air of superior age. All is old, a petrifaction of medieval human life done in adobe. There is a modern Santa Fé, to be sure, with commercial intents and purposes, but it is the straggling aggregation of low adobe huts that one remembers.

INDIAN PUEBLOS

Santa Fé is in the land of the pueblos. Taos, Picuris, San Juan, Santa Clara, San Ildefonso, Pojoaque, Nambe and Teseque are within twenty to ninety-five miles of the city, many-chambered communal homes with populations varying from twenty-five to four hundred persons. From Domingo one may reach the pueblos of Cochiti, San Domingo and San Felipe, while Sandia, Jemez, Zia and Santa Ana are in the vicinity of Albuquerque. Few tourists know that the Pueblo Indians of New Mexico own 900,000 acres of land, and that since the treaty of

Guadeloupe Hidalgo in 1848 they have been full-fledged United States citizens, though not voting, and maintaining their own forms of government. Three of the most important pueblos are Isleta, Laguna, and Acoma. Isleta is within a stone's throw of the railroad; Laguna station now is located about two miles west of the Indian settlement, the railroad track having been moved a considerable distance north; Acoma is reached from Laguna or Cubero by a drive of fifteen miles.

The aboriginal inhabitants of the pueblos, an intelligent, complex, industrious and independent race, are housed today in the self-same structures in which their forebears were discovered, and in three and a half centuries of contact with Europeans their manner of life has not materially changed. The Indian tribes that roamed over mountain and plain have become wards of the government; but the Pueblo Indian has absolutely maintained the integrity of his individuality, self-respecting and self-sufficient. The extent to which he has adopted the religion of his Spanish conquerors, or the teachings of his present guardians, amounts to only a slight concession from his persistent conservatism.

He is a true pagan, swathed in seemingly dense clouds of superstition, rich in fanciful legend, and profoundly ceremonious in religion. His gods are innumerable. The trail of the serpent has crossed his history, too, and he frets his pottery with an imitation of its scales, and gives the rattlesnake a prominent place among his deities, yet the purity and well-being of his communities will bear favorable comparison with those of the enlightened world. He is brave, honest and enterprising within the fixed limits of his little sphere. Were the whole earth

swept bare of every living thing, save for a few leagues surrounding his tribal home, his life would show little disturbance. Possibly he might not at once learn of so unimportant an occurrence. He would still alternately labor and relax in festive games, still reverence his gods and rear his children to a life of industry and content, so firmly established is he in an absolute independence.

Pueblo architecture possesses nothing of the elaborate ornamentation found in so-called Aztec ruins in Mexico. The house is usually built of stone, covered with adobe cement, and is severely plain. It is commonly two or three stories in height, of terrace form, and joined to its neighbors. The prevailing entrance is by means of a ladder to the roof of the lowest story.

The most strikingly interesting of New Mexican pueblos is Acoma. It is built upon the summit of a table-rock with eroded precipitous sides, 350 feet above the plain, which is seven thousand feet above the sea. Acoma pueblo is one thousand feet in length and forty feet high, and there is besides a church of enormous proportions. Formerly it was reached only by a hazardous stairway in the rock, up which the inhabitants carried upon their backs every particle of the materials of which the village is constructed, but easier pathways now exist. The graveyard consumed forty years in building, by reason of the necessity of bringing earth from the plain below; and the church must have cost the labor of many generations, for its walls are sixty feet high and ten feet thick, and it has timbers forty feet long and fourteen inches square.

The Acomas welcomed the soldiers of Coronado with deference, ascribing to them celestial origin. Sub-

TREES THAT HAVE TURNED TO STONE. A scene in one of the Petrified Forests of Arizona. Broken trunks of trees are lying all about.

THE SAFETY OF THE HEIGHTS. Dwellings of Pueblo Indians at Wolpi, Arizona, built high in the cliffs and almost inaccessible. Some of them have two or more stories and contain a number of rooms.

sequently, upon learning the distinctly human character of the Spaniards, they professed allegiance, but afterward wantonly slew a dozen of Zaldivar's men.

By way of reprisal Zaldivar headed threescore soldiers and undertook to carry the sky-citadel by assault. After a three days' hand-to-hand struggle the Spaniards stood victors upon that seemingly impregnable fortress, and received the submission of the Queres, who for three-quarters of a century thereafter remained tractable. In that interval the priest came to Acoma and held footing for fifty years, until the bloody uprising of 1680 occurred, in which priest, soldier, and settler were massacred or driven from the land, and every vestige of their occupation was extirpated. After the resubjection of the natives by Diego de Vargas the present church was constructed, and the Pueblos have not since rebelled against the contiguity of the white man.

THE PETRIFIED FOREST

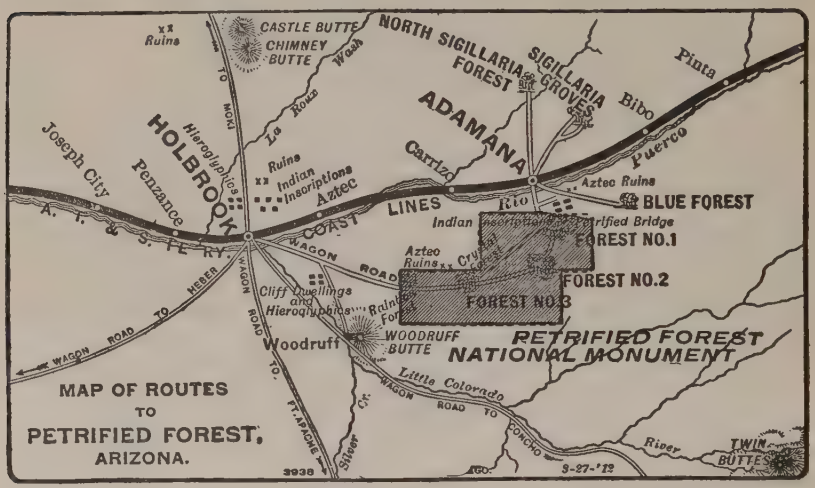
A stop-over of one or two days at Adamana, in Arizona, will permit the traveler to view one of the few natural wonders that "comes up to its brag."

Silicified wood is found on the east fork of the Yellowstone and on the high plateaus of southern Utah; small segments of trees (chips of the ancient blocks) are scattered throughout northern Arizona; but, as if laid bare for the delight of the tourist and the research of the scientist, there are huddled together in Apache County, Arizona, vast deposits of petrified wood, from the size of a toy marble to trees more than two hundred feet in length.

The Forest covers many thousands of acres, in five

separate tracts, all easily accessible from Adamana. The Third Forest is reached from Holbrook.

The First Forest, noted for its brilliant colors, is distant about six miles from Adamana (altitude, 5,277 feet). It is easily reached in an hour and a half. The chief object of interest is the Natural Log Bridge, which spans a chasm sixty feet wide—a trunk of jasper and agate



overhanging a tree-fringed pool. The Eagle's Nest, Snow Lady and Dewey's Cannon are in this locality.

The Second Forest is two and one-half miles due south of the first one, the trip requiring thirty minutes each way. It contains about two thousand acres. The trees are mostly intact, large, and many of them highly colored. The Twin Sisters are an interesting sight here.

The Third Forest covers a greater area than the others. It lies thirteen miles southwest of Adamana and eighteen miles southeast of Holbrook. This district contains several hundred whole trees, some of them more than two

hundred feet long, partly imbedded in the earth. These huge unshattered blocks of agate are magnificent specimens. The colors are very striking, comprising every tint of the rainbow. The local name of Rainbow Forest is therefore very appropriate.

The Blue Forest (smallest of the five) is seven miles east of Adamana, being one of the two districts discovered by John Muir. It is noted for the blue tints of its trees. The North Sigillaria Forest, a new "find," is nine miles north from Adamana, and contains many finely preserved specimens of the carboniferous period, some of the stumps still standing as they grew. This Forest is located on the bottom and sides of a shallow, wide canyon, with buttes and mesas of different colored clays and rocks. One fallen monarch is 147 feet long. A wide view of the Painted Desert may be had here. On the way an Indian ruin is passed, two miles out. Four miles farther the old California Trail is crossed.

The Petrified Forest may be visited any day in the year, except when high water renders the streams temporarily impassable. Leaving the steel highway of the Santa Fé, it is a southerly journey across arid mesas on a smooth road, full in the glowing Arizona sunshine. The four-horse, twelve-passenger coach is easy to ride in. The horses trot along a natural highway, in places hardpacked by vagrant winds and frequent travel. Here one has the unfailing joy of a wide horizon, and the bluest of blue skies. There are no trees, except for a scant fringe of cottonwoods on the Puerco, that inconsequential stream which one day is as dry as a bone, and the next a raging torrent; no grass, except stray tufts overlooked by foraging sheep; no human habitations, as

far as the eye can reach—just rocks, and sand, and sky, with an occasional prehistoric Indian village ruin, or lava fragments belched centuries ago from now extinct volcanoes.

Approaching the deposits from Adamana or Holbrook, one is attracted by stray bits of petrified wood that glisten like jewels by the roadside. Then one espies larger and larger blocks, then trunks of trees, then complete trees, some more than two hundred feet long, tumbled about in confusion or lying just as they were bared by the action of the elements. There seems to be no limit to the deposits—literally thousands of acres and millions of tons.

But let no one expect to see trees standing upright. They are all prone upon the ground, in a vast basin, which was once the bed of an ancient sea. Many of these stone trees are partly covered with earth, but retain their bark, sometimes even the heart.

The scene presents endless variety and charm, not the least of which is the setting of surrounding cliffs, often rising 150 feet in height, and cut up into ravines and sloping mesas, variegated with shale, clay and sandstone —faintly suggesting the Painted Desert, and it is truly marvelous to look upon millions of tons of glistening petrified trees. On some of the slopes, where they lie tumbled together, it is as if whole quarries of marble and onyx had been dynamited. And so varied and bright are the colors, it is as if rainbows had become imprisoned.

AZTEC RUINS AND HIEROGLYPHICS

Occasional ruins of prehistoric Indian settlements are encountered in the Petrified Forest region. Some com-

A Ute Encampment. This photograph shows a typical encampment of one of the nomadic Indian tribes. The tepees or tents are made of skins, and may be quickly taken down, rolled into a bundle and packed upon the supporting sticks, which in moving are dragged by a pony.

Photo by Brown Bros.

HOMES OF THE LONG-AGO. Famous reproduction of the Cliff-dwellers' Ruins. near Colorado Springs, Colo. The cliff-dwellers of early America built their habitations in the canyons of the Colorado and Rio Grande, where the action of the elements had worn away a layer of soft rock leaving layers of hard rock above and below as roof and floor for the dwelling.

prise a solitary habitation only. Others show that several families were housed together. A few indicate the presence of villages numbering many inhabitants.

The largest of these homes is the Aztec Ruins, two and a half miles east of Adamana. Here are walls of broken stone and mortar about a foot high, which mark numerous dwellings fronting a plaza 130 feet wide by 210 feet long. Near the plaza's center a small kiva has been discovered, similar to those in use by the Pueblo Indians of today. The flagstone pavement of this old kiva is in a good state of preservation.

The Hieroglyphics are near by. They are cut in the stones of the cliff for a mile or more. The "cutting," however, seems to have been done by pecking the smooth rock surface with some harder stone like petrified wood, rather than with a metallic instrument. The symbols in the first group, and in many following, are conventional and not easy to decipher. Further on, in a recess of the cliff, is a large upright rock slab on which are shown a lone man, a bird and an animal. The next record of interest is perhaps that of a royal wedding. The figures are dancing and rejoicing, while a priest holds in one hand a rod and in the other the bird of wisdom. Almost at the top of the mesa, and not far from the Aztec Ruins, may be seen hieroglyphics of flocks and herds, with symbols of disaster and increase.

THE PAINTED DESERT

Both Adamana and Holbrook are contiguous to the Navajo Indian reservation. Holbrook is an outfitting point for the Apache country. A stage leaves daily for the White Mountain reservation, where lies Fort Apache,

in the midst of picturesque mountain scenery. The unique villages of the Hopi Indians are situated about eighty miles north. En route to Hopiland you cross the Painted Desert, the plateau between the canyons of the Marble and Colorado rivers, deriving its name from the marvelous coloring of the rocks. Here live the Navajos, a pastoral people, progressive, intelligent and self-supporting. They own large numbers of cattle, sheep and goats, till small farms, make the celebrated Navajo blankets, and are expert silversmiths.

Thirty-five miles south of Zuñi Station, on Zuñi River, is the pueblo of Zuñi, inhabited by a thousand Indians, made famous through the writings of an energetic ethnologist, Mr. Frank Cushing, who lived in the pueblo for four years, first as a welcome guest and then as a member of the tribe. The Zuñis always have been an imperious people and their ceremonial dances are of world-wide renown.

CHAPTER XVII

THE CLIFF-DWELLINGS

TREASURE GROUND OF SANTA FÉ—PAJARITO PARK —VAST COMMUNAL BUILDINGS—RUINS SURROUNDING FLAGSTAFF—PATHOS OF THESE PEOPLE.

THE SOUTHWEST, we have seen, is the land of canyons and the canyons centuries ago were the haunts of the cliff-dwellers, mysterious ancestors of the Pueblo Indians, who, in building their dwellings, sought the safety and inaccessibility of the heights, utilizing the niches and caves of high cliffs with additions of masonry for their homes.

Remnants of buried civilization are scattered all around Santa Fé with a prodigality that astonishes even the archæologist. Six miles to the south, on the Arroyo Hondo, are the ruins of a communal village that has been partly excavated and has furnished part of the treasures found in the Cole collection in the New Mexico Historical Museum and elsewhere. The village stood on the brink of a cliff.

Similarly, five miles to the southwest, at Agua Fria, a curious and sprawling Mexican settlement on the Santa Fé River, is a mound covered with thousands of pieces of ornamented pottery. A partial excavation shows it to be a huge communal dwelling that yet may yield rich archæological treasures. Six miles to the north, on the Tesuque river, are similar ruins.

PAJARITO PARK

But all this is as nothing compared with the twenty thousand communal and cliff dwellings in Pajarito Park, just across the Rio Grande to the west. Pajarito plateau embraces the region between the Jemez Mountains and the Rio Grande, extending from Gallinas Creek to Cañada de Cochiti. Pajarito Park is in the center of this plateau. It runs from Santa Clara Canyon, on the north, to Capulin Canyon, on the south. See map of this section on page 171. The first cliff ruins in this park are twenty-five miles from Santa Fé and here, as Dr. Edgar L. Hewett says, is the most interesting archæological region in the United States.

The cave-dwellings of this region are not merely houses built in the shelter of some overhanging cliff, but are rooms actually carved out of the cliff itself. In untold ages past, when the first hardy cliff-dwellers sought out this secluded area, they made their homes in the many natural cavities in the cliffs. When the population began its enormous increase and no more natural shelters were to be had, they were obliged to fashion new caves for themselves, and these they dug into the soft volcanic tufa rock of the cliffs with their rude stone tools.

Every canyon has its cliff walls literally honey-combed with these artificial caves. The visitor enters through a tiny doorway and finds himself in a room varying from six to ten feet square, with plastered walls and floor as hard as cement. All the caves contain fireplaces, granaries and other reminders of domestic life, and the blackened ceilings speak of their long occupation. Many of the walls are covered with crude decorations, pictures

Photo by Brown Bros.

THE SUPREME MIRACLE. Here in the Grand Canyon of Arizona "you might lose a hundred Yosemites and never be able to find them again. Here a dozen Niagaras would form but minor details in the stupendous scene. You might scatter the whole mass of the Alps through the three hundred miles of this abysmal chasm without filling it up."

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THE FAITHFUL BURRO. The burro is a small donkey common in the mountains of the West because of his sure-footedness. The picture shows the descent by Grand View Trail, a short, steep mining path, into the Grand Canyon. The point is about 1200 feet below the southern rim of the gorge, but the bed of the Colorado River is still almost a mile farther down.

of plumed serpents and all manner of mythical beasts and personages. The cliffs themselves are adorned with thousands of crude symbols chipped into the rock by the stone hatchets of aboriginal sculptors ages before America was discovered.

Carloads of pottery and utensils have been carted away to enrich museums and private collections; and the surface is scarcely scratched, for communal ruins thus far unmapped are still being discovered and but two or three have been excavated to any extent. The ground is strewn with bits of decorated pottery, while arrowheads and stone axes are to be found about the cave ruins.

VAST COMMUNAL BUILDINGS

On the Puyé to the north, large sections of a communal building of twelve hundred rooms have been excavated. It took several seasons to do the work and it has yielded specimens that may be found scattered in museums from the national capital to the Pacific Coast.

Several hundred rooms of the Tschrega have been excavated and explored. To the south, in the Rito de los Frijoles, where Bandelier lays the scene of his *Delight-makers*, a circular ruin has been opened up. From the top of the dizzy trail that leads down into the canyon of the stream that dashes over two high cliffs in foaming waterfalls, it looks like the familiar picture of an old Greek amphitheater. In this canyon a ceremonial cave has been restored as it was in the days when the mysterious cliff-dwellers came to this canyon as the center of their empire and worshiped, possibly with the same

rites and dances as may be observed to this day in the Indian village of Tesuque, nine miles from Santa Fé, or on August 4th, at Santo Domingo, the largest Indian pueblo within forty miles of Santa Fé.

Whether these cliff-dwellers were the forefathers of the Pueblos of the village of San Ildefonso, that lies just across the Rio Grande; and of Santa Clara, a few miles north; or of San Juan, Picuris or Taos, still farther north; or of Nambé, below the famous waterfall eighteen miles north of Santa Fé; or of the pueblos to the west, Jemez, Sia, and Santa Ana; or the Rio Grande pueblos strung out south of Santa Fé from Cochiti, not far from the mouth of the Rito de los Frijoles, in majestic White Rock Canyon, to Isleta, south of Albuquerque—is a matter of dispute among ethnologists and archæologists. All agree that the civilization of the communal dwellings preceded the thousand-year-old culture of the Pueblos, and that the caves in the cliffs beneath the communal dwellings have yielded evidence of occupation in days that date back to the time of the great lava flow.

RUINS SURROUNDING FLAGSTAFF

By stopping at Flagstaff, Arizona, one may visit other ruins of the dwellings of a prehistoric people within a radius of eight miles. On the southeast, Walnut Canyon breaks the plateau for a distance of several miles, its walls deeply eroded in horizontal lines. In these recesses, floored and roofed by the more enduring strata, the dwellings are found in great number, walled up on the front and sides with rock fragments and cement, and partitioned into compartments. Some have fallen into decay, only portions of their walls remaining, and but a

narrow shelf of the once broad floor of solid rock left to evidence their extreme antiquity. Others are almost wholly intact, having stubbornly resisted the weathering of time. Nothing but fragments of pottery now remain of the many quaint implements and trinkets that characterized these dwellings at the time of their discovery.

PATHOS OF THESE PEOPLE

Fixed like swallows' nests upon the face of a precipice, approachable from above or below only by deliberate and cautious climbing, these dwellings have the appearance of fortified retreats rather than habitual abodes. That there was a time, in the remote past, when warlike peoples of mysterious origin passed southward over this plateau, is generally credited. And the existence of the cliff-dwellings is ascribed to the exigencies of that dark period, when the inhabitants of the plateau, unable to cope with the superior energy, intelligence and numbers of the descending hordes, devised these unassailable retreats. All their quaintness and antiquity can not conceal the deep pathos of their being, for tragedy is written all over these poor hovels hung between earth and sky, which hold no place in recorded history. The struggles and the fate of these people are all unwritten, save on these crumbling stones, which are their sole monument and meager epitaph. Here once they dwelt. They left no other print on time.

At an equal distance to the north of Flagstaff, among the cinder-buried cones, is one whose summit commands a wide-sweeping view of the plain. Upon its apex, in the innumerable spout-holes that were the outlet of ancient eruptions, are the cave-dwellings, around many of

which rude stone walls still stand. The story of these habitations is likewise wholly conjectural. They may have been contemporary with the cliff-dwellings. That they were long inhabited is clearly apparent. Fragments of shattered pottery lie on every hand.

CHAPTER XVIII

NATURE'S SUPREME MIRACLE

THE GRAND CANYON OF ARIZONA—THE DESCENT—IN THE ABYSS—POWELL'S GIGANTIC ACHIEVEMENT—THE SPLENDOR OF A NEW DAY

THE SPECTACLE of the Grand Canyon of Arizona is something that one can never forget. Even the mighty waters of Niagara cannot impress one as does this stupendous miracle in rock, carved by a river and the winds and rains of heaven; even the Gothic cathedrals of Europe which seem to have gathered under their arching roofs so much of the vastness of the out-of-doors and so much of the religion of the ages, do not smite one into silence in quite the same majestic fashion.

> "How still it is! Dear God, I hardly dare
> To breathe, for fear the fathomless abyss
> Will draw me down into eternal sleep."*

Here is a gorge over two hundred miles long, from a mile to a mile and one-half deep, and ten to fifteen miles wide from rim to rim. At the bottom of this great chasm flows the Colorado River, the largest factor responsible for this immense chasm in the earth's crust. This great gorge is filled with mountains, some of them

* From Henry Van Dyke's *The Grand Canyon and Other Poems*, published by Charles Scribner's Sons.

5,000 feet high, upon the top of which the observer on the rim looks out.

The various strata of rock composing the crust of the earth are exposed to view—the white limestone on the

surface, the red sandstone, the blue lime, and the bottom gorges of deep purple granite form a marvelous combination in color effect. The activity of the elements, the winds of centuries, the rains and the surging

river, have shaped and fashioned this wonderful canyon into weird and grotesque formations.

Perhaps nowhere else is the crust of the earth's surface open to view so vividly. The story of its formation is written in rock, as if it were a printed page—the waving of the water, and the raging of the winds have left their handwriting in stone.

THE DESCENT

Only by descending into the canyon may one arrive at anything like comprehension of this marvelous void. There are five paths down the southern wall of the canyon in the granite gorge district—Bass', Hermit, Bright Angel, Grand View and Hance's trails. The following account of a descent of the old Hance trail will serve to indicate the nature of such an experience, except that the trip may now be safely made with greater comfort, and on horseback all the way:

For the first two miles it is a sort of Jacob's ladder, zigzagging at an unrelenting pitch. At the end of two miles a comparatively gentle slope is reached, known as the blue limestone level, some 2500 feet below the rim, that is to say—for such figures have to be impressed objectively upon the mind—five times the height of St. Peter's, the Pyramid of Cheops, or the Strassburg Cathedral; eight times the height of the Bartholdi Statue of Liberty; eleven times the height of Bunker Hill Monument. Looking back from this level the huge picturesque towers that border the rim shrink to pigmies and seem to crown a perpendicular wall, unattainably far in the sky. Yet less than one-half the descent has been made.

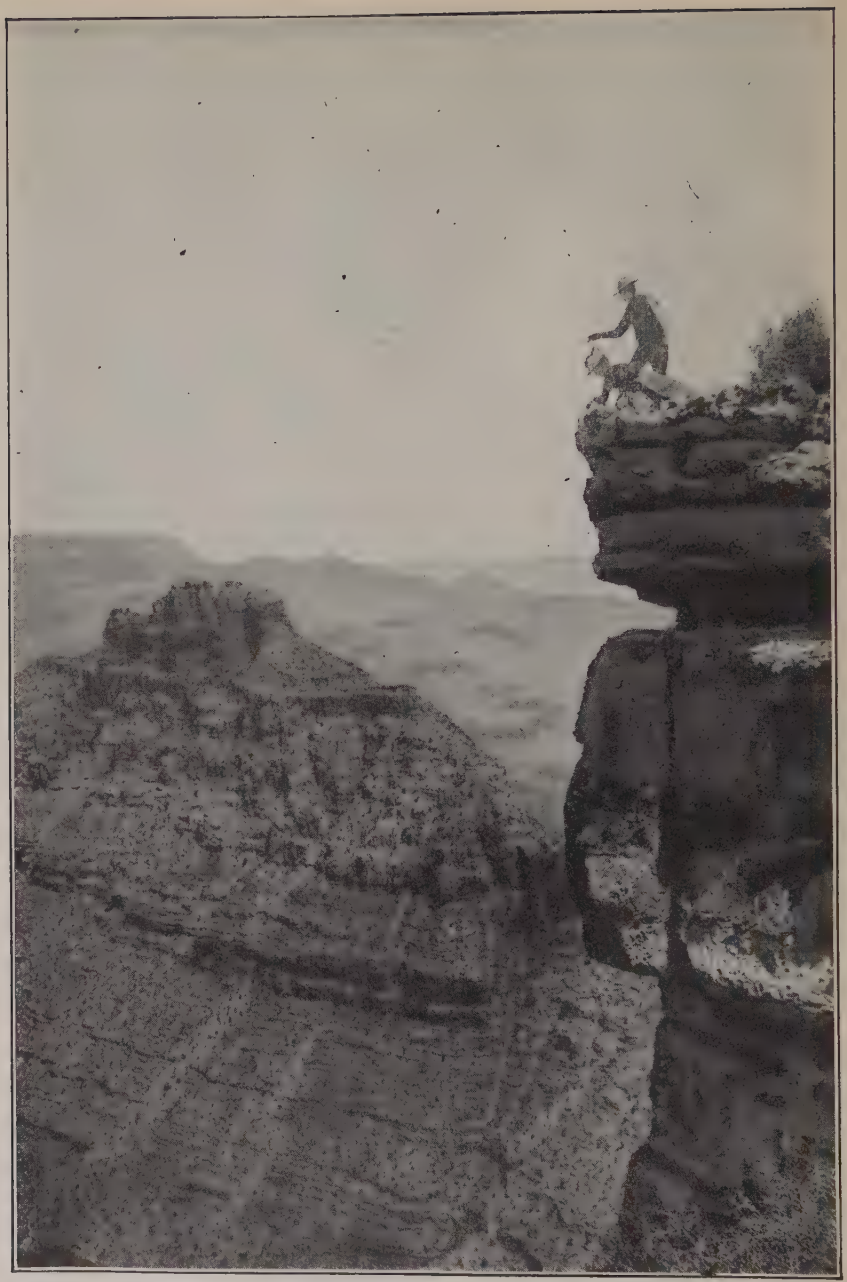
Overshadowed by sandstone of chocolate hue the way grows gloomy and foreboding, and the gorge narrows. The traveler stops a moment beneath a slanting cliff five hundred feet high, where there is an Indian grave and pottery scattered about. A gigantic niche has been worn in the face of this cavernous cliff, which, in recognition of its fancied Egyptian character, was named by the painter, Thomas Moran, the Temple of Sett.

A little beyond this temple it becomes necessary to abandon the animals. The river is still a mile and a half distant. The way narrows now to a mere notch, where two wagons could barely pass, and the granite begins to tower gloomily overhead, for we have dropped below the sand-stone and have entered the archæan—a frowning black rock, streaked, veined, and swirled with vivid red and white, smoothed and polished by the rivulet and beautiful as a mosaic. Obstacles are encountered in the form of steep, interposing crags, past which the brook has found a way, but over which the pedestrian must clamber. After these difficulties come sheer descents, which at present are passed by the aid of ropes.

The last considerable drop is a 40-foot bit by the side of a pretty cascade, where there are just enough irregularities in the wall to give toe-hold. The narrowed cleft becomes exceedingly wayward in its course, turning abruptly to right and left, and working down into twilight depth. It is very still. At every turn one looks to see the embouchure upon the river, anticipating the sudden shock of the unintercepted roar of waters. When at last this is reached, over a final downward clamber, the traveler stands upon a sandy rift, confronted by

Photo by Brown Bros.

LIFE-GIVING WATER. An irrigation ditch in the Wenatchee Valley, Washington—a desert that has been made to bloom.



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Upon the Dizzy Heights. Looking down upon Ayer's Peak, a mountain 6,000 feet high, in the Grand Canyon, Arizona.

nearly vertical walls many hundred feet high, at whose base a black torrent pitches in a giddying, onward slide, that gives him momentarily the sensation of slipping into an abyss.

IN THE ABYSS

With so little labor may one come to the Colorado River in the heart of its most tremendous channel, and gaze upon a sight that until recently has had fewer witnesses than the wilds of Africa. Dwarfed by these prodigious mountain shores, which rise immediately from the water at an angle that would deny footing to a mountain sheep, it is not easy to estimate confidently the width and volume of the river. Choked by the stubborn granite at this point, its width is probably between 250 and 300 feet, its velocity fifteen miles an hour, and its volume and turmoil equal to the Whirlpool Rapids of Niagara. Its rise in time of heavy rain is rapid and appalling, for the walls shed almost instantly all the water that falls upon them. Drift is lodged in the crevices thirty feet overhead.

For only a few hundred yards is the tortuous stream visible, but its effect upon the senses is perhaps the greater for that reason. Issuing as from a mountain side, it slides with oily smoothness for a space and suddenly breaks into violent waves that comb back against the current and shoot unexpectedly here and there, while the volume sways, tide-like, from side to side, and long curling breakers form and hold their outline lengthwise of the shore, despite the seemingly irresistible velocity of the water. The river is laden with drift, huge tree trunks, which it tosses like chips in its terrible play.

POWELL'S GIGANTIC ACHIEVEMENT

Standing upon that shore one can barely credit Powell's achievement, in spite of its absolute authenticity. Never was a more magnificent self-reliance displayed than by the man who not only undertook the passage of Colorado River but won his way. And after viewing a fraction of the scene at close range, one can not hold it to the discredit of three of his companions that they abandoned the undertaking not far below this point. The fact that those who persisted got through alive, is hardly more astonishing than that any should have had the hardihood to persist. For it could not have been alone the privation, the infinite toil, the unending suspense in constant menace of death that assaulted their courage; these they had looked for; it was rather the unlifted gloom of those titanic depths, the unspeakable horrors of an endless valley of the shadow of death, in which every step was irrevocable.

THE SPLENDOR OF A NEW DAY

Returning to the spot where the animals were abandoned, camp is made for the night. Next morning the way is retraced. Not the most fervid pictures of a poet's fancy could transcend the glories then revealed in the depths of the canyon; inky shadows, pale gildings of lofty spires, golden splendors of sun beating full on façades of red and yellow, obscurations of distant peaks by veils of transient shower, glimpses of white towers, half drowned in purple haze, suffusions of rosy light blended in reflection from a hundred tinted walls.

Again on the plateau, one finds that the descent into the canyon has bestowed a sense of intimacy that amounts

almost to a mental grasp of the scene. The terrific deeps that part the walls of hundreds of castles and turrets of mountainous bulk may be approximately located in barely discernible penstrokes of detail, and will be apprehended mainly through the memory of upward looks from the bottom, while towers and obstructions and yawning fissures that were deemed events of the trail, will be wholly indistinguishable, although they are known to lie somewhere flat beneath the eye. The comparative insignificance of what are termed grand sights in other parts of the world is now clearly revealed. Twenty Yosemites might lie unperceived anywhere below. Niagara, that Mecca of marvel seekers, would not here possess the dignity of a trout stream. A man, standing at a short distance on the verge, is an insect to the eye.

Should it chance to rain heavily in the night, next morning the canyon is completely filled with fog. As the sun mounts, the curtain of mist suddenly breaks into cloud fleeces, and while one gazes these fleeces rise and dissipate, leaving the canyon bare. At once around the bases of the lowest cliffs white puffs begin to appear, creating a scene of unparalleled beauty as their dazzling cumuli swell and rise and their number multiplies, until once more they overflow the rim, and it is as if you stood on some land's end looking down upon a formless void. Then quickly comes the complete dissipation, and again the marshaling in the depths, the upward advance, the total suffusion and the speedy vanishing, repeated over and over until the warm walls have expelled their saturation and again reveal their shimmering veils of color.

It is, indeed, a place of magic.

Long may the visitor loiter upon the verge, power-

less to shake loose from the charm, tirelessly intent upon the silent transformations until the sun is low in the west. Then the canyon sinks into mysterious purple shadow, the far Shinumo Altar is tipped with a golden ray, and against a leaden horizon the long line of the Echo Cliffs reflects a soft brilliance of indescribable beauty, a light that, elsewhere, surely never was on sea or land. Then darkness falls, and should there be a moon, the scene in part revives in silver light, a thousand spectral forms projected from inscrutable gloom; dreams of mountains, as in their sleep they brood on things eternal.

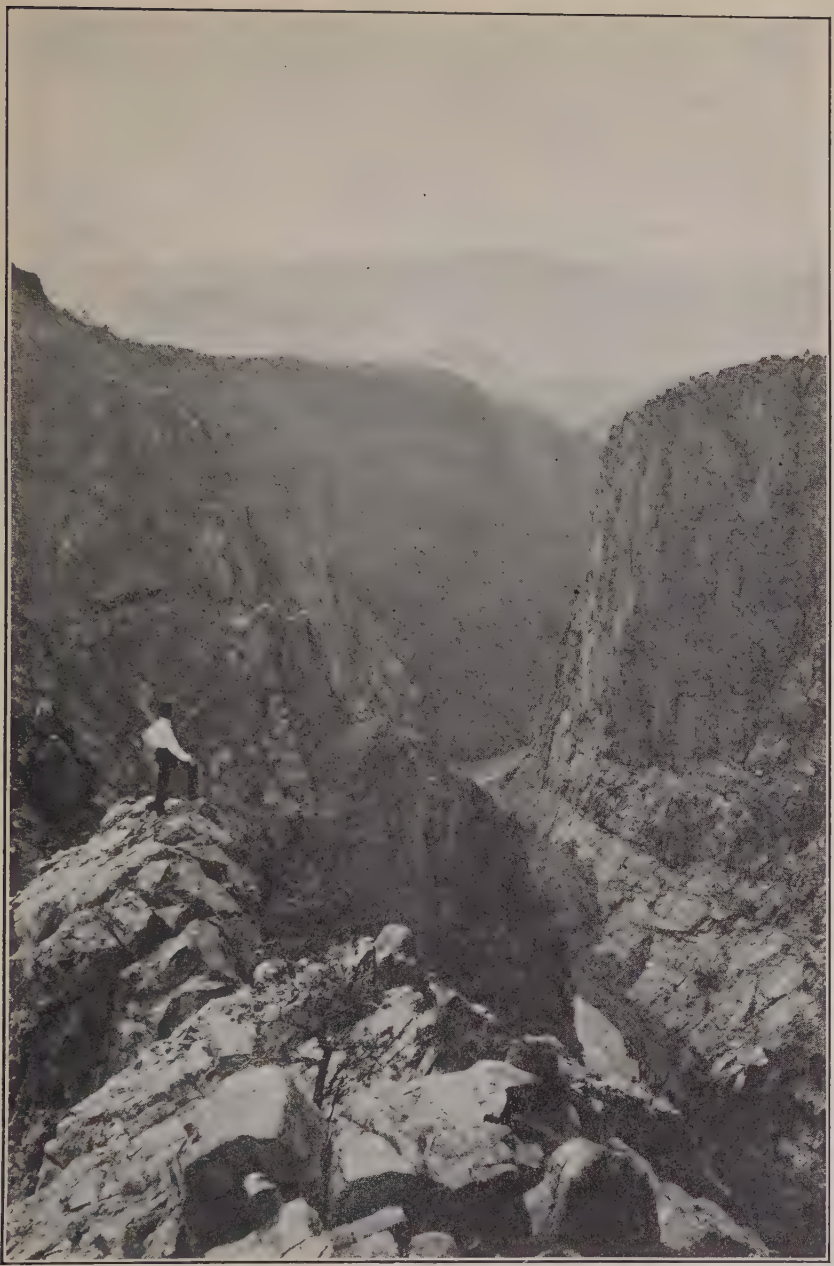

Photo by Brown Bros.

THE ROYAL GORGE THROUGH THE ROCKIES. This deep and gloomy though majestic defile is a mile and a half long and almost half a mile deep, and is used by the Denver and Rio Grande division of the Southern Pacific Railroad. There is a tradition that Spanish missionaries knew the gorge as early as 1642. The first railroad train passed through in 1879.

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A Natural Gateway to a Garden of Glory. Massive gateways of red sandstone lead to the Garden of the Gods at the foot of the far-famed Pike's Peak. The latter mountain, rearing its snowy summit(14,000 feet) in the background, was named in honor of General Pike, who discovered it in 1806.

CHAPTER XIX

MAKING THE DESERT BLOOM

DARING PROJECTS OF UNCLE SAM—TERMS OF THE—RECLAMATION ACT—WHAT THE ROOSEVELT DAM IS DOING FOR ARIZONA — THE MIRACLE OF YAKIMA VALLEY—THE WENATCHEE LANDS.

IF THIS twentieth century is an age of extravagance, it is also an age of economy. We are introducing scientific management into factory and home; we have induced the waters and the winds, and even to some extent the sun, to do our work; we have learned the lesson of conservation; we have achieved results in intensive and in dry farming; and we have through vast irrigation projects succeeded in making the once worthless desert bloom. The limits of the Great American Desert are becoming ever narrower and narrower.

Everyone is more or less familiar with the great irrigation works that have been carried through in the United States since the passage of the Reclamation Act in 1902—the highest dam in the world (351 feet) on the Boise River in Idaho; the Shoshone dam in Wyoming, 328 feet in height; the dam on the Rio Grande in New Mexico, producing the largest lake of its kind in the world, covering almost 65 square miles (41,280 acres); the Gunnison tunnel, six miles in length, with a discharge capacity of 1,300 cubic feet per second; and a score of others.

TERMS OF THE RECLAMATION ACT

According to the terms of the act Congress was to devote the proceeds from the sales of the public lands in arid sections to the construction, operation and main-

Approved irrigation projects commenced, area to be reclaimed, with expenditure to and percentage of completion on December 31, 1913, by locations.
(Source: The Reclamation Service, Department of the Interior.)

Location.	Project.	Estimates, December 31, 1913.		
		Area.	Expenditures.[a]	Per Cent of Completion.[b]
		Acres.	Dollars.	
Arizona	Salt River	175,000	11,771,196	94
Arizona-California	Yuma	131,000	6,750,803	65
California	Orland	20,000	603,000	61
Colorado	Grand Valley	53,000	712,985	16
	Uncompahgre Valley	140,000	5,467,231	60
Idaho	Boise	220,000	8,822,613	60
	Minidoka	118,700	5,272,054	91
Kansas	Garden City	10,677	379,659	100
Montana	Huntley	32,405	1,441,197	98
	Milk River	219,557	2,214,687	32
	Sun River	216,346	1,231,107	10
Montana-North Dakota	Lower Yellowstone	60,116	3,182,182	95
Nebraska-Wyoming	North Platte	129,270	5,905,770	87
Nevada	Truckee-Carson	206,000	5,422,332	80
New Mexico	Carlsbad	20,277	970,620	100
	Hondo	10,000	380,028	77
New Mexico-Texas	Rio Grande	[c]155,000	3,137,239	30
North Dakota	North Dakota pumping	26,182	960,215	50
Oregon	Umatilla	55,000	1,708,854	68
Oregon-California	Klamath	70,700	2,532,039	84
South Dakota	Belle Fourche	100,000	3,315,501	90
Utah	Strawberry Valley	60,000	2,392,801	73
Washington	Okanogan	9,920	714,413	90
	Yakima	[d]137,361	6,915,143	[e]84
Wyoming	Shoshone	164,122	4,227,328	51
Total		2,540,633	86,430,997	..

[a] The amounts in this column include the total amounts paid out for construction and operation and maintenance without amounts that have been collected for services rendered, operation and maintenance assessments, etc. [b] The percentages noted in this column represent the ratio which costs of construction to date bear to present estimate of total construction cost. [c] 25,000 acres additional in Mexico. [d] Sunnyside unit, 100,000 acres; Tieton unit, 34,000 acres. [e] Storage unit, 24 per cent; Sunnyside, 96 per cent; Tieton, 94 per cent.

tenance of irrigation works to bring to the desert lands the water necessary to make them fertile. These lands are given under the terms of the homestead law practically free of cost to the settler.

In the first ten years of its existence the United States

Reclamation Service constructed 7,300 miles of canals—enough to reach from New York to San Francisco and back; it excavated twenty-one miles of tunnels, dragging out rock and earth to the enormous total of 93,000,000 cubic yards; it built 626 miles of road, 2,094 miles of telephone and seventy miles of levees; it purchased 1,051,000 barrels of cement and manufactured in its own mill 340,000 barrels more; and as a result of this ten years of work it made water available for 1,159,234 acres. At the beginning of 1920, over 125,000 persons were living on the 30,000 farms irrigated by the Service. As the Director of the United States Reclamation Service expressed it: "To create opportunities for American citizens is the basic intent of the Reclamation Act"; and although success in desert farming comes only by hard, untiring effort, it is estimated that ninety per cent of the settlers on the new irrigated lands are making good.

Of all the government's irrigation projects, however, the Salt River project is by far the most highly developed. On most of the irrigated lands forty per cent of the available water is not in use, but the Salt River farmers are irrigating practically every acre for which they can obtain water. About 90,000 acres are in alfalfa, and although alfalfa and other forage crops will always be the chief products of the valley, experiment will probably develop other valuable crops. The average farmer has about forty acres. Ten or twelve years ago land could be bought for twenty dollars an acre or less; last year it averaged a hundred.

The Roosevelt Dam, which is the *sine qua non* of the Salt River Valley, was completed early in 1911. It was

capable of holding 1,360,000 acre feet, with a depth of 227 feet at the dam. In April, 1914, the reservoir was still not one-third full, and never since its completion had it been more than half full, but in May, 1915, the reservoir was completely filled and the hearts of the farmers quietly and deeply thankful. The water problem for the vast area drawing its supply from the Salt River has been solved, for once filled the reservoir storage is sufficient to tide the valley over the longest period of drought on record.

THE MIRACLE OF THE YAKIMA VALLEY

In the Yakima Valley, Washington, known throughout the country for its fertility, although on it there once grew nothing but sage brush and bunch grass, is irrigable land enough to support a population of a million people. Less than a third of this is at present cultivated, watered from small canals built by private capital, and from the two constructed by the United States Reclamation Service.

A journey along the banks of these canals or the Yakima River unfolds a panorama of unusual breadth and interest. Instead of the heavy forests of the west side, the sage brush struggles for existence just above the main ditches; but the country below is checkered with orchards, farms, and gardens; and cottonwoods protect the banks of the streams. Impressive is the sight in springtime when fruit trees are all in bloom and the Blossom Festival, participated in by a hundred thousand people, is ushering in the full tide of spring; or in autumn when deeper touches of color mark an immense crop ready for the harvester.

From the hills on either side, the picture assumes its

Photo by Brown Bros.

CROSSING THE GREAT ROCKIES. The far-famed Georgetown Loop, known from coast to coast and from the Canadian boundary line to the Gulf of Mexico as one of the most remarkable feats of railroad engineering and one of the really celebrated scenic trips of America. The view is from Sunrise Peak, showing the mining towns of Silver Plume and Georgetown.

Photo by Brown Bros.

TRACES OF AN ANCIENT SEA. Extensive salt beds bear witness to the vast sea which has dwindled into what is now Great Salt Lake. These salt beds were photographed some sixteen or eighteen miles from Salt Lake City.

most perfect form. Cities, meadows, orchards, vineyards, hop fields, vegetable gardens, alfalfa farms, corn fields, and prairies, bisected and criss-crossed by railroads, highways, canals, and rivers, protected by the brown hills near by and watched over by the mountains in the distance, supply composition for pictures that in detail and variety must discourage all competition.

THE WENATCHEE LANDS

Equally beautiful but of smaller dimensions is the Wenatchee Valley, reaching from the Columbia River well up into the foothills of the Cascades. This, too, was a desolate brown slope until the effects of irrigation were felt on its rich volcanic ash soil. After that only ten years were necessary to convert it into a garden of dazzling splendor. Instead of the forlorn sage brush, a maze of orchards, extending up the valley and ascending the hills, presents in springtime a solid mass of blossoms, varying from purest white to daintiest shades of pink. Serpentining along the hill sides, as if protecting the gardens below, are the great viaducts, conducting the precious waters that irrigate the land; while dodging from one side of the vale to the other, or paralleling the Great Northern Railroad, the Wenatchee River hastens onward towards the Columbia.

Throughout all the Western states one may see lands that were once impossible covered with luxuriant grasses, grains and orchard trees; for the arid region sleeps only because of thirst. Slake that and it becomes a garden of paradise, its rich soil yielding full measure, running over, harvests which to the Eastern farmer are fabulous indeed.

CHAPTER XX

UNDER THE TURQUOISE SKY

IN THE ROCKY MOUNTAIN REGION—DENVER, THE GATEWAY—THE SURROUNDING WONDERLAND—FABULOUS RICHES — COLORADO SPRINGS — THE LORDLY PIKE'S PEAK—MANITOU AND THE GARDEN OF THE GODS—IN THE CRIPPLE CREEK DISTRICT—THROUGH THE ROYAL GORGE—AROUND THE CIRCLE—A HAPPY HUNTING GROUND.

THE GREAT backbone of the American Continent is the Rocky Mountains, and the summits of its main range make the parting of the waters, the "Continental Divide." The name of the Rockies is appropriate, for on these mountains and their intervening plateaus naked rocks are developed to an extent rarely equaled elsewhere in the world. The leading causes of this are the great elevation and extreme aridity, the scanty moisture preventing growth of vegetation, and the high altitudes promoting denudation of the rock-material disintegrated at the surface. Enormous crags and bold peaks of bare rocks mostly compose the mountains, while the streams flow at the bases of towering precipices in deep chasms and canyons filled with broken rocks. Being unprotected by vegetation, the winds sweep the hills clean of soil and sand, the steep slopes of the valleys are strewn with fragments of the enclosing cliffs, and the rivers are usually without flood-plains or intervales, where soils may gather. In the extensive and highly elevated plateaus,

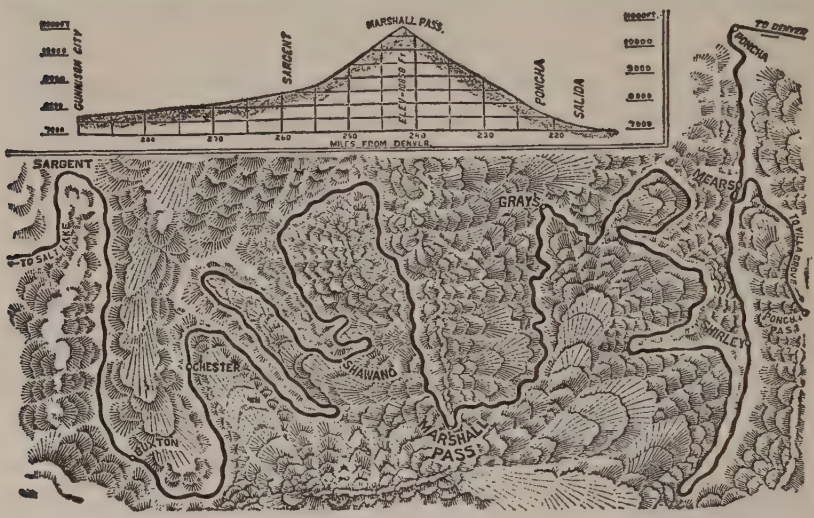
the streams usually run in the bottoms of deep canyons, their channels choked with débris. Added to this the whole Rocky Mountain region has in the past been a scene of great volcanic activity: many extinct volcanoes appear, broad plains are covered with lava, and scoria and ashes are liberally deposited all about.

There are numerous mountain ranges, plateaus and parks under different names in this extensive mountain region and the higher peaks in the United States generally rise to somewhere between thirteen and fifteen thousand feet elevation. These mountains and the plains to the east compose the vast arid region constituting fully two-fifths of the United States, where irrigation is necessary to agriculture, and, in consequence, less than ten per cent of this large surface bears forests of any value. We are told that so scant is the moisture, if the whole current of every water-course in this district were utilized for irrigation it would not be possible to redeem four per cent of the land. Some of this surface, however, bears grasses and plants that, to an extent, make pasturage. The precious metals and other useful minerals are found in abundance, and various parts of the region have been developed by the many valuable mines, making their owners enormous fortunes.

Through this vast mountain district, over deserts and along devious defiles, a half dozen great railways lead from the Mississippi Valley to the Pacific slope.

Denver is the great city of the Rockies, and for mountain scenery Colorado is without a peer, not even Switzerland and her Alps offering more than a fair comparison. The crescent chain which forms the chief attraction of Cental Europe covers, altogether, an area

of about 95,000 square miles. Its crowning peak, Mont Blanc, 15,784 feet high, is the most famous and most often named of the mountains of the modern world. But Colorado has many peaks lacking little of this height, and they stand amid others much higher than, but not nearly so bleak, as those included in the Alpine chain. The famous Jungfrau is 13,793 feet high. The Matterhorn is



The Marshall Pass District, showing the tortuous path of the railroad as it crosses the Continental Divide, on the "Around the Circle" tour. From the summit the waters flow eastward to the Atlantic and westward to the Pacific.

still lower. Vegetation ceases at a lesser height than it does in Colorado. The Pass of the great St. Bernard is only 8,170 feet high. Marshall Pass, in Colorado, is 10,850 feet and is climbed every day by Denver and Rio Grande trains. Le Veta Pass is over 9,200 feet high—another railway station. Alpine Pass, on the Colorado and Southern, and Rollins Pass on the Denver and Salt Lake, have each an elevation of 11,660 feet. Hell Gate,

on the Colorado Midland main line, is 10,540 feet. The town of Leadville, a familiar residence for several thousand people, is 10,200 feet above the sea. Some of the beautiful and famous parks of Colorado have their lowest depths higher than the average height of the Alpine chain.

DENVER, THE GATEWAY

Denver stands on a high plateau, through which the South Platte River flows. This "Queen City of the Plains" was settled by adventurous pioneers as a mining camp in 1858, and through the wonderful development of mining the precious metals has had rapid growth. A broad, graceful arch bearing the word "Welcome" greets the tourist as he steps from the Union Depot. The city has many manufactures and some of the most extensive ore-smelting works in the world, the annual output of gold and silver being enormous. There are many fine buildings, and a noble State Capitol with a lofty dome standing on a high hill. The city was named in honor of General James W. Denver, who was an early governor of Kansas and served in the Civil War. He first suggested the name of Colorado, and thus his name was given to its capital. Denver has built for its waterworks, forty-eight miles south of the city, one of the highest dams in the world, 210 feet, enclosing a gorge on the South Platte to make an enormous reservoir holding an ample supply.

THE SURROUNDING WONDERLAND

Being so admirably located, Denver is a center for excursions into one of the most attractive mountain

regions in America. The great Colorado Front Range, or eastern ridge of the Rockies, stretches grandly across the country and has behind it one range after another, extending far west to the Utah Basin. Towering behind the Front Range is the Saguache Range, the chief ridge of the Rockies, which makes the Continental Divide. Among these complicated Rocky Mountain ranges are various extensive parks or broad valleys, nestling amid the peaks and ridges, which were originally the beds of inland lakes.

Out of this mountain region flow scores of rivers in all directions, the affluents of the Mississippi to the east, the Rio Grande to the south, and the Colorado and the Columbia to the west. All of them have carved down deep and magnificent gorges, two to five thousand feet deep, and in places the wonderful results of ages of erosion are displayed in the peculiar constructions of vast regions, and in special sections, where the carvings by water, frost and wind-forces have made weird and fantastic formations in the rocks on a colossal scale, as in the Garden of the Gods.

FABULOUS RICHES

These mountains and gorges are also filled with untold wealth, and the mines, producing wealth of gold and silver, have attracted vast numbers, so that the whole district around and beyond Denver is a region of mining towns, which are reached by a network of railways disclosing the most magnificent scenery, and in many parts the most startling and daring methods of railroad construction.

Whenever land can be reclaimed for agriculture or grazing on the flanks of the mountains and in the pro-

tected valleys and parks, it is done, so that the district has extensive irrigation canals, in some parts diverting practically all the available flow of water in the streams.

The course of the traveler on the "Around the Circle" tour is indicated by arrows. Start may be made from Denver, Colorado Springs, Manitou or Pueblo.

Northwest from Denver is the picturesque Boulder Canyon, and here at the mining town of Boulder is the University of Colorado. Beyond are Estes Park, one of the smaller enclosed parks among the mountains,

having Long's Peak on its verge, rising 14,270 feet. West from Denver is the Clear Creek Canyon, and the route in that direction leads through great scenic attractions, past Golden, Idaho Springs and Georgetown, where silver-mining and health-resorts divide attention, and the mountains display beautiful lakes. Beyond, the railway threads the Devil's Gate, climbing up by remarkable loops, and reaches Graymont with Gray's Peak above it. In this district is the mining town of Central City, while to the northwest is the extensive Middle Park, a popular resort for sportsmen. Southward from Denver the railway route passes the splendid Casa Blanca, a huge white rock a thousand feet long and two hundred feet high, and crosses the watershed between the Platte and the Arkansas.

COLORADO SPRINGS

Here, amid the mountains, seventy-five miles from Denver, upon a plateau at six thousand feet elevation, is the famous city of Colorado Springs, a noted health-resort. It is pleasantly laid out, with wide, tree-shaded streets, like a typical New England village spread broadly at the eastern base of Pike's Peak. Here live large numbers of people who are unable to stand the rigors of the climate on the Atlantic coast, and it has been carefully preserved as a residential and educational city. The settlement began in 1871, but there are no springs nearer than Manitou, several miles away in the spurs of Pike's Peak.

THE LORDLY PIKE'S PEAK

Probably the best known summit of the Rockies is Pike's Peak, rearing its snowy top over Manitou, and

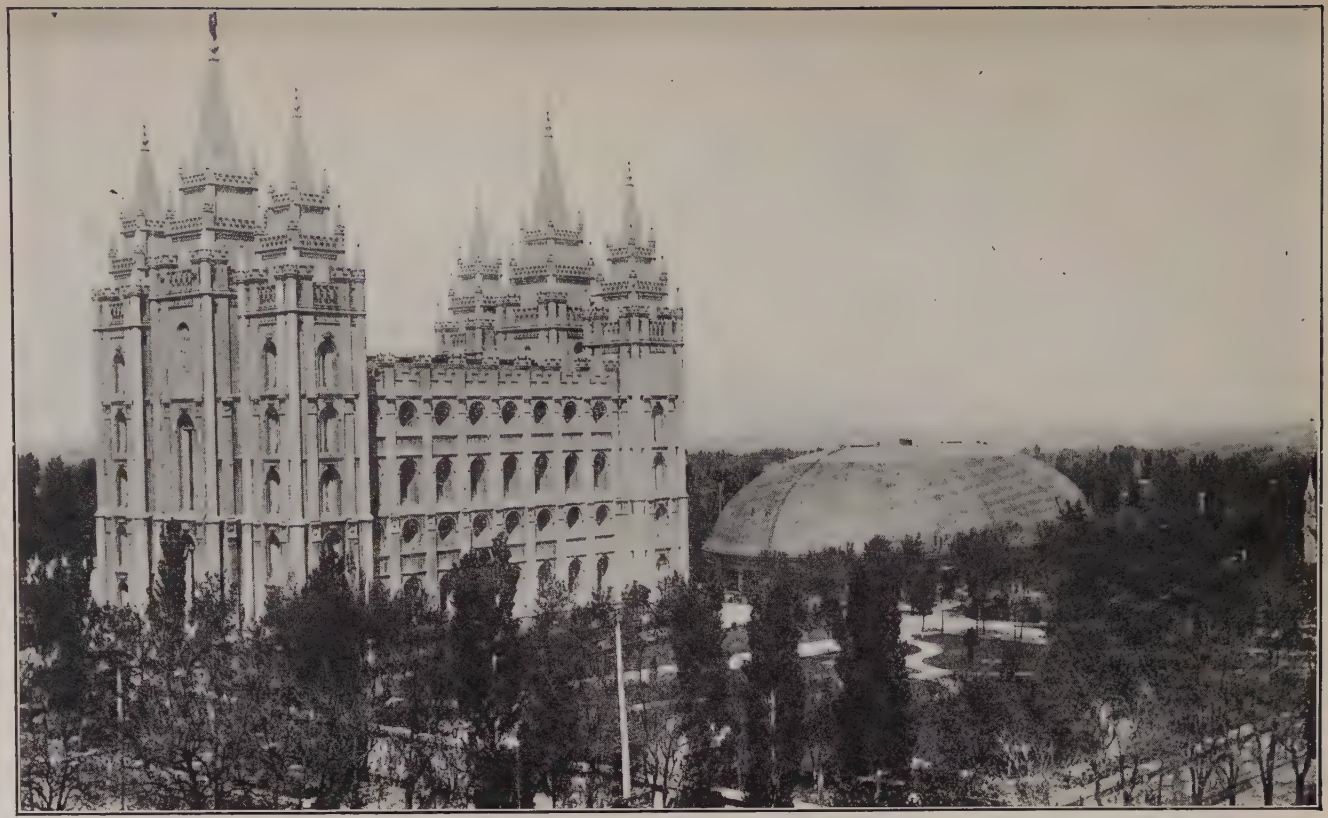


Photo by Brown Bros.

THE PRIDE OF THE MORMONS. The splendid Mormon Temple in Salt Lake City, which took forty years to build and cost about $4,000,000. The low egg-shaped Tabernacle beside it covers an auditorium seating seven thousand persons and housing one of the largest organs in the world.

Photo by Brown Bros.

THE DEPOSIT OF THE AGES, CLEOPATRA TERRACE, YELLOWSTONE PARK. For many centuries water has boiled up out of the earth here, leaving as it evaporated a little more mineral deposit until these terraces, one of the most interesting sights in the Yellowstone, were formed, covering now about two hundred acres.

about six miles west from Colorado Springs, to an elevation of over fourteen thousand feet. As it rises almost sheer, in the Colorado Front Range, this noble mountain can be seen from afar across the eastern plains. A cog-wheel railway nine miles long ascends to the summit from Manitou. In 1806 General Zebulon Pike, then a captain in the army, led an exploring expedition to this remote region and discovered this noble mountain, which was given his name. Forests cover the lower slopes, but the top is of bare rocks, usually snow-covered.

MANITOU AND THE GARDEN OF THE GODS

Manitou has a group of springs of weak compound carbonated soda, resembling those of Ems, and beneficial to consumptive, dyspeptic and other patients. They are at the entrance to the romantic Ute Pass, a gorge with many attractions, which was formerly the trail of the Ute Indians in crossing the mountains. Nearby, upon the *mesa*, or "table-land," is the Garden of the Gods, a tract of about one square mile, thickly studded with huge grotesque cliffs and rocks of white and red sandstones, their unique carving being the result of the erosive processes that have been going on for ages. They are all given appropriate names, and its Gateway is a passage just wide enough for the road, between two gigantic red rocks. Farther south on the Arkansas River is Pueblo, an industrial city in a rich mining district, where there is a Mineral Palace, having a wonderful ceiling formed of twenty-eight domes, into which are worked specimens of all the Colorado minerals. The route then crosses the Veta Pass, whereon is the abrupt bend known as the "Mule Shoe Curve," and beyond this it descends

into the San Luis, a park covering six thousand square miles. Sentineling its western side is the triple-peaked Sierra Blanca, the loftiest Colorado mountain, rising almost 14,500 feet.

IN THE CRIPPLE CREEK DISTRICT

Following up the Arkansas River from Pueblo, a route goes northward behind and west of Pike's Peak into the Cripple Creek district, situated at an elevation of nearly ten thousand feet among the mountains, where in 1890 was a remote cattle ranch. The next year gold was found there, a new population rushed in, and it has since become a leading gold producer. Westward the route crosses the Continental Divide and descends into the extensive South Park, covering two thousand square miles, reaching Leadville. In the early days this was the great gold placer mining camp of California Gulch. Afterwards it produced enormous quantities of silver from the extensive carbonate beds discovered in 1876, and the name was changed to Leadville. North of Leadville is the noted Mountain of the Holy Cross, 14,200 feet high, named from the impressive cruciform appearance of two ravines crossing at right angles and always filled with snow.

THROUGH THE ROYAL GORGE

The Grand Canyon of the Arkansas is one of the most magnificent gorges in the Rocky Mountains. This river above Pueblo forces its passage through a deep pass known in the narrowest part as the Royal Gorge, where the railway is laid alongside the boiling and rushing stream, with rocky cliffs towering 2,600 feet above the line. It ascends westward, beyond the sources of the

Arkansas, crossing the Continental Divide by the Marshall Pass, at 10,850 feet elevation, the route up there showing, in its abrupt and bold curves, great engineering skill. The Pass is always covered with snow, and the descent beyond it is to the mining town of Gunnison.

The Gunnison River is followed down through its magnificent gorge, the Black Canyon giving a splendid display for sixteen miles of some of the finest scenery of the Rockies. The river is an alternation of foaming rapids and pleasant reaches, and within the canyon is the lofty rock pinnacle of the Currecanti Needle. The adjacent gorge of the Cimarron, a tributary stream, gives also a splendid display of Rocky Mountain wildness, and below it the river passes through the Lower Gunnison Canyon, bounded by smooth-faced sandstone cliffs, and finally falls into Grand River, one of the head-streams of the Colorado.

AROUND THE CIRCLE

The combined magnificence of these canyons and mountains makes the environment of the Colorado mining region one of the most attractive scenic districts in America, and the railways have arranged a route of a thousand miles through the mountains, starting from Denver, under the title of "Around the Circle," which crosses and recrosses the Continental Divide, threads the wonderful canyons, surmounts all the famous passes over the tops of the Rocky ranges, and includes the most attractive scenery of the district.

Sublimity and beauty are not usually convertible terms. They do not mean the same thing. Grandeur is austere. Yet there one finds the most singular combina-

tions of these two incompatibilities. The grandeur is over all, the overpowering sentiment of the vast domain; yet in unexpected nooks and corners one finds the other—beauty beyond compare. When one looks for the first time upon the Rampart range, fencing the western rim of that vast undulating plain like a wall, it is impossible for him to imagine Manitou and Ute Pass and Cheyenne Canyon and the road to the Garden of the Gods, nestling there so near at hand, beneath the cold dome of Pike's Peak. When one is at Cañon City, a pretty town sleeping among its orchards in the sunshine, he does not think how soon the train will glide between the mighty jaws of the Arkansas Canyon. When one traverses drowsily the mesa lands, smooth and wide and given over to bees and gardens, that lie west of Denver, he cannot by himself foresee the Clear Creek Canyon just ahead, or imagine the six parallel tracks and the windings and contortions that make the "loop" at its farther end above Silver Plume. At Salida, at five o'clock in the morning, when the mountain world is filled with turquoise blue, earth and air and sky, not merely tinted, but full of the strange, solid color that heralds the mountain dawn—one cannot imagine the rare, sweet, thin air of the Marshall Pass that is just ahead, or see the rocky bosom of Ouray, bare, solemn, silent, changeless, serene in the vastness of the upper air, yet so near that one may almost count the stones that strew that dismal summit.

So it is that beauty and grandeur never have been so nearly akin elsewhere as they are in Colorado. Yet everything is on a scale of inconceivable immensity. Even the mesas and table-lands, where the grass grows as on a farm, are four or six thousand feet above the sea—

Photo by Brown Bros.

"Old Faithful" in Eruption. This famous geyser in Yellowstone Park is named because of the clock-like regularity of its eruptions. For over twenty years it has been spouting at average intervals of sixty-five minutes.

Courtesy of Burlington Route

MAIN MOUNTAIN. A scene in Nature's fairyland, on the west side of Rainier National Park, showing the marvelous reflection of the mountain in beautiful Aurora Lake.

more than twice as high as Mount Everett. There is nothing low. The word "valley" is a relative expression; low and high have not their usual significance. Looking back as the train crawls up a mountain-side in long, doubling curves, one is surprised to see, floating far below him, a long and trailing film of silver lace; something so near and ethereal and beautiful that he cannot recognize it as that which he has looked up to all his life—a cloud. And on one side the valley sinks away, narrowing and lowering in distance that seems infinite. One was down there but a short time before and they seemed high. But from the opposite window, whither one transfers himself to see the very roof of the world, sure that he has attained to such a height, as he looks out it is still up, up the slanting, narrow track, the world of mountains below, above, everywhere.

Mingled with these general sensations are the special wonders—the places and scenes that have been described by travelers over and over again. In the case of most of them, it was never of much avail to try to reproduce them in words; while all the camera reproduces in miniature, though scientifically exact, fails utterly to convey any other meaning than that of prettiness.

A HAPPY HUNTING GROUND

And if Colorado is the Paradise of the nature-lover, it is also the Happy Hunting Ground of the sportsman, for forests still cover a large part of the state and they are the natural cover for elk, antelope, the mountain sheep and a variety of smaller game. Any prospector will tell one that there is nothing more common than the fresh bear track near the stream, looking like the footprint of a

barefoot baby. All mountain men encounter herds of elk and deer.

The region of the foothills—the land between plain and mountain, including both—is the natural home of the elk. It is in the more outlying regions, of course, that the big, shy game now lives. In the days of Indian occupation, all Colorado was a hunting field. The encroachments of civilization have naturally restricted the field, but with the result that there is now more game in the places still occupied than in former times. This unoccupied region is still, in the aggregate, as large as New York State.

Then there is fishing of the best. The watercourses of Colorado comprise eight principal rivers, which flow from their sources in the mountains in all directions, increasing in volume from almost countless tributaries. In all these streams the mountain trout is a native and for many years trout fishing has been an important pastime of residents and their visitors.

CHAPTER XXI

AMERICA'S DEAD SEA

LAKE BONNEVILLE—DARING FOUNDERS OF SALT LAKE CITY—NATURE'S CONTRIBUTION—SEEING THE CITY—SALTAIR BEACH—RIVALING PANAMA.

ALMOST THE whole of the present State of Utah was once covered by a great body of fresh water, now known to scientists as Lake Bonneville. The name is in honor of Captain Bonneville, an army officer, who in 1833 first called the attention of the world to proofs of the former existence of this great body of water. This lake was of the quaternary period and occupied an area in excess of 20,000 square miles with a shore line, exclusive of islands, of about 3,050 miles, and a maximum depth of 1,053 feet. Its greatest length was 350 miles, its greatest width 145 miles, and its general shape, that of a huge pear, with the stem end extending into Arizona. A small part of the present states of Nevada and Idaho lay beneath its waves. The lake surface was a thousand feet higher than the present level of the Great Salt Lake, but its waters were fresh, the outlet being to the Pacific Ocean through the Snake River. The shelving beaches of the old lake are plainly seen along the sides of the Wasatch Range in the vicinity of Jordan Narrows and the entire section once under Bonneville's waves gives proof of its existence through shell deposits and the remains of prehistoric life.

Utah's scenery is peculiarly its own. The fertile

mountain valleys remind one of sunny Italy, while the pointed peaks of the Wasatch range contain a touch of Alpine beauty. The memory of the tints of its skies is not soon forgotten and painters have said that the scene presented, as the sun sinks to rest behind the lake, is undoubtedly one of the most beautiful of the kind in all the world.

DARING FOUNDERS OF SALT LAKE CITY

When the pioneers of 1847, under the leadership and guidance of Brigham Young, set out on their memorable journey across the trackless prairies and into the fastnesses of the Rocky Mountains, they had no precedents to direct them in their conduct, and no guides to lead them into the promised land. They were explorers and settlers; they broke away from the frontier and, traveling steadily toward the setting sun, left civilization far behind. Arriving in the valley of the Great Salt Lake on July 24, 1847, exhausted from their long tramp, they were content when their leader announced that "this is the place."

It was the dogged determination of these pioneers that laid the foundations of Salt Lake City, reclaiming for the nation a territory greater in extent than the thirteen original colonies. They came into a desert and made it productive by irrigation; they laid out a city; they established homes. On the foundations thus laid there has grown a city of more than a hundred thousand inhabitants, one of the most beautiful in the United States.

NATURE'S CONTRIBUTION

Nature has aided man in making Salt Lake City attractive. Overlooking a great valley, with the shim-

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"In Silence Hushed." Among the American Alps in Glacier National Park. A view of McDermott Lake with Gould Mountain (9,541 feet) in the center and Grinnell Mountain (8,838 feet) on the right.

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ALL ABOARD FOR ICEBERG LAKE. Travelers silhouetted against Mt. McDermott in Glacier National Park. Iceberg Lake is a short horseback trip distant from Mt. McDermott and there in summer huge bergs may be seen floating.

mering water of the inland sea at its feet, no better spot on which to build a city could have been found in all the West. From the University campus, on a bench several hundred feet higher than the business portion of the city, one has a view the beauty of which will cling to him as long as memory lasts. At his feet are the broad, tree-lined streets of the city with neat and attractive homes. Here and there a great mansion or a lofty steeple towers above the foliage. Farther on are office buildings, with the stately city and county building in the midst of a beautiful park to the south and the famous Mormon Temple on the north. Across the valley, beyond the emerald stretches of field, stand the Oquirrh mountains, in their enveloping blue haze. To the east are the richly colored slopes of the Wasatch and beyond are great mountain peaks, many of them more than ten thousand feet above sea level, wearing their caps of snow. To the west, flashing in the sunlight, like a mighty gem, is Great Salt Lake, more than eight times larger than the Dead Sea of Palestine.

The business portion of the city is paved throughout and the streets are washed daily, so that no dust offends. Streams of mountain water flow in the gutters on both sides of the street. Many of the streets in the residence portions are parked on the sides or in the middle and all are shaded by magnificent trees. Roses bloom from June until November.

SEEING THE CITY

A person may come into the city, hasten to the Temple Square, view the magnificent Temple, hear a pin drop in the spacious Tabernacle, and later attend an organ

recital there. Words will fail him if he attempts to put his impressions into words, for no words can describe the marvelous charm of the organ's sweet, vibrant tones. Still under its magic influence, the tourist whose time is limited is gathered up in a "seeing" car, and is rushed away while the lecturer imparts prosaic facts about the Brigham Young Monument, the Beehive House, the Amelia Palace, Eagle Gate, and the tomb of Brigham Young, the founder of the city. Then the car hurries through a limited portion of the residence districts and returns to the business section.

The Temple Square is a ten-acre block containing the Mormon Temple, Tabernacle and Assembly Hall. The Temple, guarded by the angel Moroni and open only to Latter-day Saints, is a massive structure, built of granite quarried in Little Cottonwood Canyon and hauled twenty miles by ox-team. The Tabernacle organ, one of the finest in the world, was built under the supervision of Brigham Young. It contains 5,500 pipes ranging from two inches to thirty-two feet in length and capable of four hundred tonal variations. Free organ recitals are given every day at noon from the middle of April until August.

Eagle Gate, spanning State Street at South Temple, was formerly the entrance to the private estate of Brigham Young; and Beehive House, Lion House, Amelia Palace and the Executive Building are all Mormon buildings centering around the gate. The Beehive House is the official residence of President Joseph F. Smith; the Lion House was formerly the residence of Brigham Young's wives; and the Amelia Palace, opposite the Eagle Gate, now owned by Col. Edwin

Holmes, was built for the favorite wife of Brigham Young. The Executive Building was built to contain the offices of the Mormon church.

The traveler who is not satisfied with superficial observation, but whose inquiring mind seeks exact information, knows the city is itself not the source of its wealth. Comparatively little manufacturing is done in the intermountain country. Whence comes the wealth which manifestly is here? From the mines and the fields. Salt Lake is the center of one of the greatest mining countries in the world. In the mountains surrounding the valley are mines which produce annually millions of dollars' worth of gold, silver, copper, lead, zinc, coal. Mere mention of the famous camps carries the story of wealth—Park City, Bingham, Alta, Tintic, Deep Creek, and others.

A rich agricultural country also surrounds the city, needing only the magic touch of irrigating waters, which has been applied in large measure. With the certainty of moisture at times when it is needed, field crops have never been known to fail.

SALTAIR BEACH

No visit to Salt Lake City is complete without a trip to Saltair Beach, eighteen miles west, and a bath in the buoyant waters of the Dead Sea, the wonderful lake in which one may frolic as one will without fear of drowning. The body floats like a cork, so heavy are the salt-laden waters, and one emerges tingling and refreshed. Saltair has other pleasure-resort attractions also—among them one of the largest dancing pavilions in the world. The lake itself is eighty miles long and forty wide and

contains many islands. And although the waters are so salty the islands contain fresh-water springs of rare excellence.

RIVALING PANAMA

Another trip one should not miss is to the vast copper-mining camp at Bingham. When the spectator beholds the half a hundred powerful locomotives and over twenty great steam shovels, as well as five hundred ore cars operating every hour of the day and night on the face of this one great mountain of copper ore, it is easy to believe that these are the world's greatest mining operations. The stupendous undertaking is second in magnitude only to the work on the Panama Canal. Here one sees men, with the aid of the most modern mechanical assistance, literally tearing down a gigantic mountain and hauling it away. It has been estimated that even with the aid of all the great mechanical contrivances and thousands of men it will require fifty years to accomplish this gigantic feat—the moving away of one of the great Oquirrh mountains.

CHAPTER XXII

THE FANTASTIC PLAYGROUND OF NATURE

NATURE'S GIGANTIC EXPOSITION IN YELLOWSTONE PARK—THE BOILING RIVER—THE NORRIS GEYSER BASIN—LANDMARKS OF THE ROCKIES—IN THE FIRE-HOLE REGION—THE REAL HOME OF THE GEYSER—A JEWEL IN A DEEP SETTING—WILD ANIMALS—THE CROWNING GLORY.

IN YELLOWSTONE PARK, in the very heart of the Rocky Mountains, set apart forever by act of Congress for the benefit and enjoyment of mankind, Nature has established her own gigantic exposition, displaying in this mountain-bound plateau a greater variety of wonders than she has collected in a like area in any other part of the world. Here may be seen, either in active operation or in an extinct condition, almost every known variety of terrestrial phenomenon. Geysers, hot springs, paint pots, sulphur springs, and fumaroles are plentiful, and in addition may also be found cliffs of natural glass, lava beds, great riven rocks filled with basalt, extinct volcanoes, and petrified forests, and over amid the fastnesses of the Hoodoo Mountains and on the slopes of the great Tetons may be seen remnants of an ancient geological period—active glaciers.

THE BOILING RIVER

Upon entering the Park the first indication the tourist sees of subterranean heat is the Boiling River, which

issues from an opening in the rocks and empties directly into the Gardiner. This river is the outlet for the waters of the Mammoth Hot Springs, which find their way to this point through underground passages. A few miles beyond, the Mammoth Hot Springs themselves are reached.

The living springs are marvels of beauty. Their overhanging bowls, adorned with delicate fretwork, are among the finest specimens of Nature's handiwork in the world, and the colored waters themselves are startling in their brilliancy. Red, pink, black, canary, green, saffron, blue, chocolate, and all their intermediate gradations are found here in exquisite harmony.

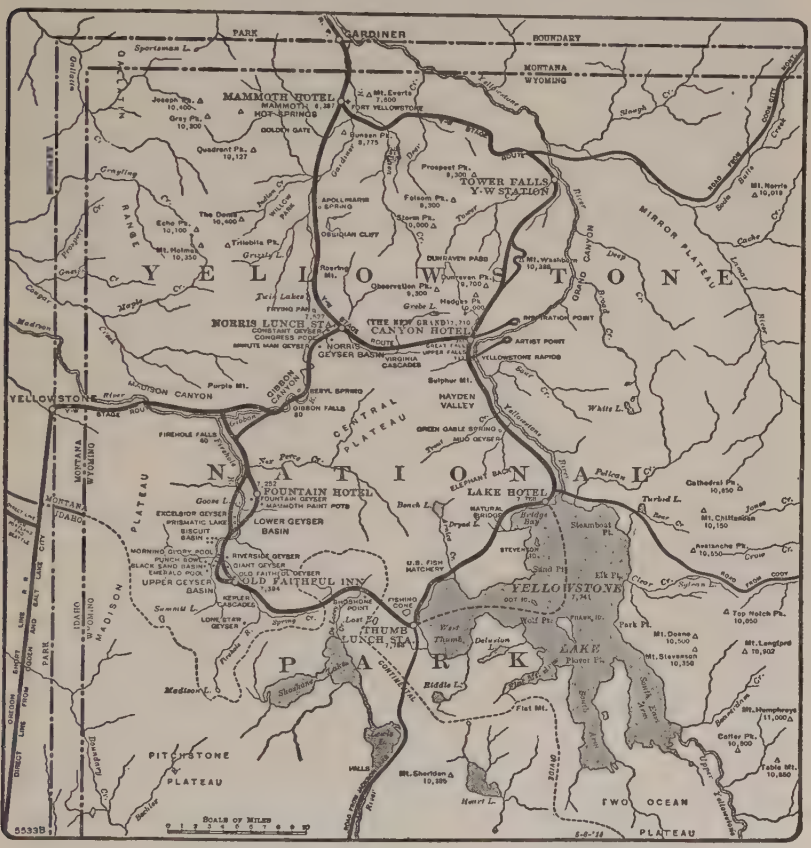
The springs rise in terraces of various heights and widths, having intermingled with their delicate shades chalk-like cliffs, soft and crumbly. These are the remains of springs from which the life and beauty have departed.

As the tourist proceeds through the Golden Gate and along Kingman Pass toward those objects in which his keenest interest centers—the Geysers—he may see to the northward, casting the shadow of its mighty presence over all the valley, that old sentinel of the Park, Electric Peak, whose snow-capped head rises 11,150 feet above sea level.

Twelve miles from the Springs is found a most curious volcanic formation. Obsidian Cliff, as its name indicates, is a cliff of natural glass at the head of Beaver Lake (so named from the old beaver dam which forms it), rising black and jagged in vertical columns two hundred feet above the road. Here is located the only road of native glass upon the continent.

THE NORRIS GEYSER BASIN

After passing Obsidian Cliff evidences of hot-spring action constantly increase, until they reach their climax in the Norris Geyser Basin. This basin is supposed to be


GARDINER
PARK
BOUNDARY
MONTANA
WYOMING
MAMMOTH HOTEL
MAMMOTH HOT SPRINGS
FORT YELLOWSTONE
GOLDEN GATE
TOWER FALLS
Y-W STATION
APOLLINARIS SPRING
OBSIDIAN CLIFF
DUNRAVEN PASS
NORRIS LUNCH STATION
CONSTANT GEYSER
CONGRESS POOL
MINUTE MAN GEYSER
NORRIS GEYSER BASIN
(THE NEW CANYON HOTEL)
OBSERVATION POINT
ARTIST POINT
YELLOWSTONE RAPIDS
VIRGINIA CASCADES
SELBY FALLS
UPPER FALLS
YELLOWSTONE
MADISON CANYON
GIBBON CANYON
GIBBON FALLS
FIREHOLE FALLS
HAYDEN VALLEY
GREEN GABLE SPRING
BLUE GEYSER
CENTRAL PLATEAU
NATIONAL
FOUNTAIN HOTEL
FOUNTAIN GEYSER
MAMMOTH PAINT POTS
LAKE HOTEL
EXCELSIOR GEYSER
PRISMATIC LAKE
BISCUIT BASIN
LOWER GEYSER BASIN
MORNING GLORY POOL
PUNCH BOWL
BLACK SAND BASIN
EMERALD POOL
RIVERSIDE GEYSER
GIANT GEYSER
OLD FAITHFUL GEYSER
OLD FAITHFUL INN
UPPER GEYSER BASIN
KEPLER CASCADES
LONE STAR GEYSER
U.S. FISH HATCHERY
FISHING CONE
THUMB LUNCH STATION
LAKE
YELLOWSTONE
PARK
LAKE HOTEL
Steamboat Pt.
Elk Pt.
Sand Pt.
Frank Pt.
Park Pt.
Flat Mt.
Mt. Doane 10,500
Mt. Stevenson 10,358
Top Notch Pk. 10,050
Mt. Langford 10,902
Mt. Humphreys 11,000
Cutler Pk. 10,800
Table Mt. 10,850
Mt. Norris 10,016
MIRROR PLATEAU
Cathedral Pk. 10,850
Mt. Chittenden 10,150
Avalanche Pk. 10,550
Turbid L.
Julius Cr.
Cruse Cr.
Clear Cr.
Sylvan L.
Eleanor L.
Thumb L.
Delusion L.
Ward L.
Madison L.
Shoshone L.
Lake
Biddle L.
Heart L.
Mt. Sheridan 10,385
PITCHSTONE PLATEAU
TWO OCEAN PLATEAU
Boundary
Basin
Hills
Mud Geyser
Mud Volcano
Alum Cr.
Crevice Cr.
Grizzly L.
Grayling Cr.
Grebe L.
Twin Lakes
Observation Pt. 9,300
Dunraven Pt. 9,700
Mt. Washburn 10,388
Hedges Pt. 10,000
Roaring Mt.
Prospect Pt. 9,300
Folsom Pt. 8,300
Storm Pt. 10,000
Sunset Pt. 8,775
Quadrant Pt. 10,127
Grey Pt. 10,300
Joseph Pt. 10,400
Echo Pt. 10,100
The Dome 10,400
Mt. Holmes 10,350
Tricuspid Pt.
Sportsman L.
Obsidian Cr.
Willow Park
Gneiss Cr.
Meadow Cr.
Nez Perce Cr.
Purple Mt.
Observation Peak
Mt. Everts 7,600
Gallatin Range
Gallatin River
Yellowstone River
Lamar River
Soda Butte Cr.
Slough Cr.
Specimen Ridge
Tower Cr.
Antelope Cr.
Crystal Cr.
Elk Park
Pleasant Valley
Hellroaring Cr.
Bridge Bay
Natural Bridge
Dryad L.
Bench L.
Excelsior Cr.
Gibbon River
Firehole River
Nez Perce Cr.
Goose L.
Summit L.
Spring Cr.
Fishing Cone
Lost Lake
Shoshone Point
Stevenson Island
Sedge Bay
Hayden Valley
Alum Creek
Yellowstone Lake
Yellowstone River
Lewis River
Lewis Lake
Heart Lake
Snake River
Continental Divide
Two Ocean Pass
Two Ocean Creek
Pelican Cr.
Pelican Valley
Mt. Sheridan
Mt. Doane
Mt. Stevenson
Mt. Langford
Mt. Humphreys
Cutler Pk.
Table Mt.
Top Notch Pk.
Avalanche Pk.
Mt. Chittenden
Cathedral Pk.
Mt. Norris
Crevice Cr.
Cruse Cr.
Julius Cr.
Turbid L.
Clear Cr.
Sylvan L.
Eleanor L.
Thumb L.
Delusion L.
Ward L.
Madison L.
Shoshone L.
Lake
Biddle L.
Heart L.
Mt. Sheridan 10,385

minor importance as compared with the Firehole Basin. The main objects of interest here are the Monarch Geyser, the largest in the basin, the Black Growler, and the Hurricane. The eruptions of the Monarch are very irregular, but it sometimes displays tremendous power, forcing the hottest of water to a height varying from one hundred to two hundred and forty feet. The Hurricane and Black Growler are prodigious steam vents, whose continuous roar and violent gusts bear a striking resemblance to the driving blasts of a tempest, and may be heard a distance of four miles.

LANDMARKS OF THE ROCKIES

Just as the road commences to descend from the high plateau between the Gibbon and the Firehole Rivers the tourist receives his first glimpse of the Teton Mountains, over fifty miles away. They are distinctly visible from every important peak in the park.

From the summit of these mountains the range of vision covers probably the most remarkable group of river sources upon the earth. To the north are the headwaters of the Missouri. To the east rise the Yellowstone, the Wind, and the Big Horn Rivers. Southward across the Wind River Range rises the Platte. From the west flank of the mountains issue the tributaries of the great Colorado, while finally, interlaced with the very sources of the Missouri and Yellowstone, are those of the Snake.

IN THE FIREHOLE REGION

In the Firehole Geyser region, which includes the Lower, Middle, and Upper Basins, the most peculiar phenomena of the Park are seen at their best.

Copyright by Kiser Photo Co.

A Picturesque Camp. Blackfeet Indians in camp on St. Mary Lake, Glacier National Park, Montana. A more perfect setting could not be imagined.

Photo by Brown Bros.

"The Fields with Plenty Crowned." The miracle of record-breaking harvests is not so hard to believe when one has traveled through the West and seen the vast wheat fields so marvelously grown by nature and so marvelously garnered by the inventions of man.

In the Lower Basin are located the Fountain Geyser, the first one of magnitude the tourist meets and one of the best in the region; the Great Fountain, in some respects the most remarkable geyser in the Park, as its formation is quite unlike that of any other; the Mammoth Paint Pots, the most prominent example of this class of phenomena, and nearly seven hundred hot springs. Here also is located the Firehole, a large hot spring, from the bottom of which, to all appearances a light-colored flame is constantly issuing, at times assuming a ruddy tinge, and always flickering like the lambent flame of a torch. It is only an illusion, however, and is probably caused by escaping gas.

THE REAL HOME OF THE GEYSER

It is not until the tourist arrives at the Upper Basin, however, that he reaches the real home of the genus geyser. Here are fifteen examples of the first magnitude, besides scores of less important ones, and here they hold high carnival. The Grotto, the Splendid, the Giant, the Castle, the Lion, the Giantess, and the Bee Hive are located here; and here also stands Old Faithful, whose hourly eruption affords the visitor, however transient, an opportunity of witnessing at least one geyser in action. To it fell the honor of welcoming civilized man to this remarkable region, for when the Washburn party, from a dense forest, which concealed everything around them beyond a radius of a few hundred feet, emerged suddenly into an open, treeless valley, there, directly in front of them, scarcely two hundred yards away, stood the vertical column of Old Faithful, 150 feet in the air.

The most beautiful geyser in the whole region however,

is the Bee Hive. While not so grand and powerful as some of the others, from an artistic point of view it is the most perfect geyser in the Park.

About eight miles beyond the Upper Geyser Basin the road crosses the Continental Divide, and then for a distance of about ten miles lies on the Pacific Slope. From Shoshone Point a glimpse may be had of Shoshone Lake, quietly nestled among the mountains, and far away to the south may be seen the towering peaks of the great Tetons.

A JEWEL IN A DEEP SETTING

At Lake View a sharp turn in the forest road brings the tourist suddenly in full view of one of the most striking panoramas in the world. Immediately before him, three hundred feet below, lies the beautiful Yellowstone Lake. Beyond, far away along the eastern horizon, rise the Absaroka Mountains, while on every hand the dark pine forests shroud the slopes and are mirrored in the tranquil waters below.

Yellowstone Lake is nearly a mile and a half above the level of the sea, or a quarter of a mile higher than Mt. Washington. It has an area of 139 square miles and a maximum depth of three hundred feet. At one point upon its shore fish may be caught and cooked in the boiling spring without taking them from the line.

About twenty miles above the head of the lake is the celebrated Two-Ocean Pass, where exists a most remarkable phenomenon. From the north and from the south issue two streams, which flow along the top of the Continental Divide towards each other until each finally divides, one part passing down the Atlantic slope and the

other down the Pacific, thus forming a continuous natural water connection between the Atlantic and Pacific Oceans nearly six thousand miles long. It is supposed that the fish in the Yellowstone Lake entered through this connection.

WILD ANIMALS

Yellowstone Park is the greatest game preserve in the United States. Herds of buffalo, elk and moose are carefully protected here; and on the mountain tops are many big-horn sheep, goats and antelope. The American beaver finds a home in the valleys and streams, and fur-bearing animals frolic everywhere in the open. No one is allowed to molest bird or beast, and in this security they become so confident that many of them come habitually around the hotels, to the great delight of the guests. The park bears are famous and a few of the game birds are gradually losing their inherent fear of the proximity of mankind.

Deer and elk are frequently seen along the park drives as well as numerous members of the bear family. The buffalo are kept in a special enclosure which may be visited by a slight detour from the main-traveled road. Game fowl are seen in abundance on Yellowstone Lake and River.

THE CROWNING GLORY

As the Upper Falls are neared the road becomes decidedly picturesque. At one point it is hung upon the side of an almost perpendicular cliff overlooking the rapids of the river; at another it crosses a deep ravine over the highest bridge in the park.

A short distance below this point the now rushing river

turns abruptly to the right and disappears. Here are the Upper Falls of the Yellowstone. The narrowness of the vent and the velocity of the current force the stream far out from the face of the vertical rock in one bold leap of 112 feet.

A few hundred yards beyond this point a sharp bend in the road unfolds to the visitor, all at once, the whole vista of the Grand Canyon of the Yellowstone. For twelve miles it stretches out below the Falls, dropping sheer from a thousand to fifteen hundred feet, and bearing upon the face of its walls the most glorious color work in the world. At the head of the canyon, enveloped now in part, now in total, by a floating robe of mist, are the Lower Falls, where the river plunges headlong over a precipice 310 feet high, and then silently and beautifully winds its way along the bottom of the mighty gorge, a sinuous line of green.

Photo by Weister Co., Portland

PORTLAND AND THE "PRIDE OF OREGON." No mention of this city is complete unless Mt. Hood is spoken of. Its white summit is on the very crest of the Cascades, some twenty miles south of the Columbia River.

Photo by Weister Co., Portland

IN THE LAND OF THE APPLE. The Rogue River Valley, Oregon, in one section of which this photograph was taken, is known all over America for its wonderful apples. One apple-raiser in this district gathered two hundred bushels of apples per acre from his six-year old trees.

CHAPTER XXIII

AMONG THE AMERICAN ALPS

GLACIER NATIONAL PARK IN THE ROCKIES—FOLLOWING THE ROCKY MOUNTAIN TRAIL—THE GOING-TO-THE-SUN REGION—BY SKYLAND TRAILS—THE MAMMOTH PARK HOTELS — THE MOUNTAIN CHALET-VILLAGES.

THE TREMENDOUS mountain-land of Glacier National Park sits high up in the splendid Rocky Mountains of northwestern Montana—on and about the Continental Divide. The Glacier Park mountains outstretch from the Great Northern track all the way north to the Canadian border, and from the reservation of the Blackfeet Indians west to the Flathead River—a mountain-land 1,525 square miles in extent. With Mount Cleveland (10,438 feet) and Mount Jackson (10,023 feet) its generals, a veritable army of magnificent peaks, giants of the Divide, for all time is encamped here, peaks that rear from eight thousand to ten thousand feet above sea level, with their bases thickly forested up to the timber line, and their limestone crests by sun and wind painted in many colors—reds and browns and blues and purples. The "roof of America" this region has been christened; and from these heights waters start on journeys west to the Pacific Ocean, north to Hudson Bay and south to the Gulf of Mexico.

Atop these mountains are eighty living glaciers as inspiring as those ice-fields Americans have for many

years been crossing to Switzerland to see; of these the great Blackfeet Glacier has an area of five miles. Up in these high places, too, are nimble-footed Rocky Mountain goats, also deer and elk. Among these mountains, in the forested valleys where gorgeous wild flowers riot, are 250 glacier-fed blue mountain lakes and scores of noble cataracts and rollicking mountain streams. So many are the tremendous sights to be seen at Glacier Park and so many are the stirring out-of-door things to be done there that only that tourist who has passed a summer within the park has seen and done all.

FOLLOWING THE ROCKY MOUNTAIN TRAIL

The main entrance to Glacier National Park is opposite the Great Northern station and the automobile highway, over which an auto-stage service is maintained, follows the old Rocky Mountain Trail, for centuries the north-and-south travel route of the Indians, and said once to have extended into South America.

About four miles out a branch auto-stage road reaches westward to the Two Medicine country, where Two Medicine Lake and River are, and Rising Wolf Mountain (9,270 feet), and Mount Rockwell (9,255 feet). The Two Medicine country commemorates the two lodges in which the medicine men of the Blackfeet Indians, the one-time proprietors of the Glacier Park mountains, a hundred years ago made the medicine that put an end to a great famine that had overtaken the tribe. Rising Wolf was the Blackfeet name for Hugh Munroe of the Hudson Bay Company who settled among the Indians in 1815 and was the first white man in Montana; Rising Wolf Mountain is his monument.

A dozen miles farther on another branch road strikes west along the Cut Bank River—a famous stream for the fishing of mountain trout. In the Cut Bank country mountain-climbers on the summit of Triple Divide may dip up a hatful of water and send parts of it traveling to three different seas.

Thirty miles out from Glacier Park Hotel the automobile highway reaches the foot of deep and vivid-blue St. Mary Lake—the most beautiful mountain lake in all America. Up this lake the good little ship "St. Mary" sails westward for ten miles—deep in among the mountain giants of the Park—to the Going-to-the-Sun region.

THE GOING-TO-THE-SUN REGION

The Going-to-the-Sun region, at the head of St. Mary Lake, contains Going-to-the-Sun Mountain (9,594 feet), and close about it are Goat Mountain (8,815 feet) and Red Eagle (8,500 feet) and Little Chief (9,542 feet). Going-to-the-Sun Mountain, too, affords a good example of the wealth of historic and romantic interest that the Blackfeet Indians have by their association conferred upon the whole of Glacier Park. Going-to-the-Sun was christened by the Blackfeet generations ago, and commemorates that highly important personage of the Blackfeet, Sour Spirit. Sour Spirit, according to the Indian lore, long ago descended from his Lodge of the Sun, and taught the Blackfeet how to shoot straight with the bow and arrow, how to build commodious tepees, and how to slaughter the buffalo, herds at a time—and then, before his return to the Sun, for an inspiration to the tribesmen wrought the likeness of his face on the granite crest of that

mighty mountain that looms at the head of St. Mary, now known as Going-to-the-Sun. The Blackfeet accordingly christened that superb peak, to quote its complete title instead of its present-day shortening, The-face-of-Sour-Spirit-who-went-back-to-the-Sun-after-his-work-was-done Mountain.

On from the foot of St. Mary Lake a second division of the highway, twenty-five miles in length, extends north to the foot of Lower St. Mary Lake and thence, turning west, stretches, an inter-mountain highway now, up the Swiftcurrent Valley to another wonder place of America, deep in among the mountains: the Many-Glacier region. Here, about McDermott Lake and Falls, are the great pyramid of Grinnell Mountain, and McDermott Peak and Gould Mountain, and on the heights all around are the many glaciers that give to the region its name.

BY SKYLAND TRAILS

Up and onto the mountains, three principal trails, over which regular saddle-horse service is maintained, ascend—Gunsight, Swiftcurrent and Piegan, three skyland trails across and along the Continental Divide.

Of these the Gunsight Trail, east to west in direction, from the head of St. Mary Lake winds between Citadel and Fusillade mountains up to lofty Gunsight Lake, six thousand feet above the sea, and the region of Blackfeet Glacier, and thence, climbs the side of Mount Jackson and scales the Divide through the notch of Gunsight Pass. From the west gate of Gunsight Pass the trail winds on past Lake Ellen Wilson to the Sperry Glacier country.

Photo by Brown Bros.

WIZARD ISLAND, CRATER LAKE, OREGON. Crater Lake is one of the most interesting of all natural phenomena in the West, filling as it does the crater of a great volcanic mountain, the top of which has blown off. Wizard Island is a cinder cone, formed while the volcano was still active. The lake is about 2,000 feet deep and fills the crater approximately half full.

Photo by Brown Bros.

THE CITY WITH A SNOW-CAPPED MOUNTAIN IN ITS DOORYARD. The city of Tacoma need never lack inspiration, for in its very dooryard stands Mt. Tacoma (better known to Easterners as Mount Rainier), solemn, magnificent, perpetually white. The mountain has more than twenty glaciers extending over an area of a hundred square miles and its glittering summit suggests a perfect solitaire.

Swiftcurrent Trail, another east to west trail, from McDermott Lake ascends the upper reaches of the valley of the Swiftcurrent, and surmounts the Divide at Swiftcurrent Pass—a gap in the mighty precipice of the Garden Wall. From the Swiftcurrent Trail an expanse of mountains hundreds of miles in extent is overlooked, including Mount Cleveland, the highest peak of the park. Down the west slope of the Divide both the Gunsight and Swiftcurrent trails descend to Lake McDonald.

Piegan Trail, on the other hand, is a north-and-south trail that links the Going-to-the-Sun and the Many-Glacier regions, and follows the Divide. Sexton Glacier, Piegan Mountain, Siyeh Mountain (10,004 feet), Piegan Pass, Grinnell Glacier and Grinnell Lake are a few of the landmarks along the Piegan Trail.

THE MAMMOTH PARK HOTELS

The chain of mountain hotels and chalet-groups that has been established along the highways and trails is interesting and their chief charm lies in the ingenious manner in which the architects have built into them the atmosphere and traditions of Glacier Park. The outer walls of the Glacier Park Hotel have been constructed largely of the huge trunks of trees and its thousands of feet of exterior galleries are supported by giant tree-trunks processed so that their bark is retained and none of them is less than six feet in diameter. Inside, the most notable feature of the hotel is the Forest Lobby. Here splendid fir-tree pillars four feet in thickness rise to a skylight set in the roof, and carry a succession of interior galleries. From tree-trunks also the hotel desk, the various counters and the lamp stands are fashioned.

The floor is strewn with carpets of Blackfeet design and a host of the gay-hued blankets of the Blackfeet are hung upon the walls. Splendid heads and skins of big game who in life roamed in these mountains also adorn the walls. Still another unique thing is the open camp-fire on the lobby floor. In the evenings tourists and dignified Blackfeet chiefs and weather-beaten guides cluster about a great slab of stone on which sticks of fragrant pine crackle merrily.

The Many-Glacier Hotel is more distinctly Swiss in architecture, with its timbered walls stained in many harmonious colors and adorned with unique wood-carvings. In place of being laid out along a formal ground plan, its several sections conform to the irregular contour of the Lake McDermott shore. A mural canvas, 180 feet long, painted by Medicine Owl and eleven other Blackfeet chiefs and depicting the history of the Blackfeet nation in its palmy days, is a novel decoration in the lobby.

THE MOUNTAIN CHALET-VILLAGES

Supplemental to the hotel through Glacier Park nine chalet-groups are established—in reality nine unique mountain villages. These chalet-groups are each of them made up of club-chalets, dining-chalets and dormitory-chalets, modeled after the chalets of the Swiss Alps and picturesquely constructed of logs and stones.

For still other lodging places there have been established on Lake McDermott, and on Lake St. Mary near Going-to-the-Sun Chalets, tepee camps where the tourist may lodge somewhat as the old-time Blackfeet Indians did.

Walking tours through the park are highly popular and indeed to one who really loves the open this is the only way to travel through this great national playground. One can follow the traveled routes, stopping over night at the picturesque chalets, or push on, following the dim and little-traveled trails of the Indian and ranger, into the wilderness, but always through a region of indescribable beauty, with new scenic surprises at every turn.

CHAPTER XXIV

THE LURE OF THE NORTHWEST

A REGION OF ENDLESS CHARM—FABULOUS ORCHARDS —ROMANCE OF THE WHEAT FIELDS—THE INLAND EMPIRE — MIGHTY FORESTS — THE GREAT SALMON FISHERIES—THE MAJESTIC RIVER OF THE NORTHWEST —THE ROSE CITY AT THE FOOT OF MT. HOOD— A LAKE IN THE CRATER OF A VOLCANO—TACOMA AND SEATTLE—THE LORDLY MT. RAINIER.

THE PACIFIC NORTHWEST is a region of beautiful mountains, broad rivers and fruitful valleys. Everything that will grow in the temperate zone will grow here and with such a prodigality that it produces three-pound apples, bumper crops of wheat, and trees that reach a height of three hundred feet or more.

To the east, beyond the Cascade Mountains, the climate is similar to that of Maryland or the famous valley of Virginia, colder in winter and warmer in summer than that of the western section, but pleasant and healthful everywhere—a climate promotive of growth and vigor, health, energy and success.

The mountain tops, ever in view, are always snow-covered, and while the heat prostrations and sunstroke of midsummer work havoc in Eastern cities, people in this country work all day in comfort and at night draw their blankets closely around their shoulders, thankful for the rest that they can enjoy. These mountains, too, intercept the moisture-laden winds sweeping in from the Pacific, sending the moisture back as warm rain.

FABULOUS ORCHARDS

Some of the greatest fruit-growing country in the world is contained in the Willamette and Hood River valleys in northwestern Oregon, in the Rogue River Valley in southwestern Oregon, the Grande Ronde Valley in the northeastern part of the state, the Yakima and Wenatchee valleys in central Washington, and the Palouse country in southeastern Washington and western Idaho. One associates the apple with Oregon as naturally as one associates the orange with southern California.

Usually the fruit is sold in the orchards, the bulk of the product being shipped abroad. Over six hundred carloads of apples and four hundred carloads of other fruit—chiefly pears—are shipped from the Rogue River district annually, seven hundred carloads of apples, and sixty carloads of prunes from Union County, and a large product from the Grande Ronde Valley and the territory tributary to Lewiston, Idaho; while from the Yakima Valley, in the irrigated district, with more than two million acres of irrigable lands, hundreds of carloads of apples and peaches are shipped annually.

ROMANCE OF THE WHEAT FIELDS

Wheat, like apples, is grown in fabulous abundance in the Northwest, and Portland ships more foreign wheat than any other port in the United States. In the Inland Empire, a large area reaching as far north as Spokane, as far south as Union and La Grande, east to Lewiston, and west to Heppner and the Cascades of the Columbia, and including varied altitudes and widely divergent features of climate, the cost of grain production is very

low, and the soil seems, although repeatedly cropped, to be inexhaustible. This Inland Empire, peculiarly adapted to the raising of small grain, has carried the name of Walla Walla to the grain markets of the world, and wherever wheat is bought and sold, the name of this prosperous little city is known. The Inland Empire produces from forty to sixty million bushels of wheat each harvest, Walla Walla County alone producing a tenth of this amount.

THE INLAND EMPIRE

This region was once a desolate waste, for thousands of years ago, scientists tell us, there existed between the Rocky Mountains and the Cascade range a vast inland sea—the waters left imprisoned when the ocean receded. After many ages these pent-up waters burst the restraining barriers and forced their way to the ocean, creating the deep canyon of the Columbia, but leaving behind a broad plain, now a veritable "Land of Canaan." Its plateaus unite to form one of the bountiful "bread baskets of the world" while its valleys yield generously of nearly all the products of husbandry.

MIGHTY FORESTS

Dense forests of evergreen trees almost envelop the hills and mountains. Scarcely any portions were originally left bare, except the higher peaks, which in a spirit of independence seem to have pushed their bald heads up and above this beautiful covering. Into the fertile valleys and along the river banks clear to the sea the stately ranks of these forests once advanced, but such localities are now, for the most part, given over to

the cities and the husbandmen or else in a state of semi-transformation are awaiting the day when they too will be devoted to the peaceful pursuits of agriculture.

The sturdy monarchs have all been honored with names and thoroughly worthy of their names they are, without a blemish to mar their fame in spite of the ages through which they have lived. Most prominent is the Douglas fir, or Douglas spruce, the giant of the forest, growing erect as a plumb-line until it ends in a pyramidal crown two hundred feet or more above the ground. This is a most important tree, for its product houses the people, and for the past ten years has insured Washington first place in lumber production in the United States. Some of the largest trees reach the enormous proportions of eight, ten, and even twelve feet in diameter, a single one producing material sufficient to build a palace of huge dimensions. Of great importance also is the red cedar, reaching sometimes a height of two hundred feet and having a diameter in rare cases of over twenty feet; yielding for the state of Washington two-thirds of all the shingles produced in the United States.

THE GREAT SALMON FISHERIES

If Washington and Oregon did not possess their thousands of fertile acres of fruit and grain, their timber and their natural wealth, the yearly harvest from the sea would still be worth enough to make them rich, for the greatest salmon fisheries in the world are here along the Columbia, where, year after year, early in the spring, the salmon begin to move, leaving the ocean in accordance with the impulse which comes only once in their lives,

back to the fresh water that was their birthplace, to end their lives in some mountain torrent, perhaps hundreds of miles from the ocean.

It is a glorious sight to see the salmon entering the Columbia. On one day there is not a fin in sight, and twenty-four hours later one might almost cross the river on their backs, as George Francis Train declared he did, some years ago. In myriads they come, pushing, fighting for first place, springing up falls and ascending rapids —the feats they perform in reaching their destination seem incredible. Those which escape the trap, fish wheel, gill net and other devices for their capture, swim steadily up stream (fasting always after entering fresh water) until they reach that locality which appeals to them as proper for spawning. Here the paired-off fish make a sort of nest, scooping out a shallow place and scraping pebbles about it so that the precious eggs may not wash down stream. Once hatched, everything able to catch them feasts upon them, but in spite of all they go each year in millions to the sea, while the old ones die, once the eggs are cared for.

THE MAJESTIC RIVER OF THE NORTHWEST

It is difficult for one who has never seen the Columbia to realize its size. It reaches, near its mouth, a width of seventeen miles. For over a hundred miles it is open to ocean-going vessels of the deepest draft and it is the main artery for water traffic for a region which is imperial in the extent of its resources and the size of its territory.

Its upper waters sluice mining camps innumerable, furnish water power and carry millions of logs, which, converted into lumber, find their way to almost every

Photo by Brown Bros.

THE MOST MAJESTIC PEAK IN THE STATES. A view of Mt. Rainier from the road that leads to Paradise Valley. The mountain is 14,408 feet high, the loftiest peak in the United States outside of Alaska, excepting only Mt. Whitney in California, which surpasses it by 93 feet. It stands isolated from the main range and affords a spectacle of graceful and majestic beauty unequaled in America.

Photo by Brown Bros.

ON THE SOUTH ALASKAN COAST. Cordova bids fair to become an important Alaskan city, being the outlet of the great Copper and Bering Rivers coal fields and terminus of the C. N. & N. W. Railroad.

country in the world. Its lower waters teem with salmon in season, and a great fleet of both steam and sailing craft traffic upon it and its tributaries. The products of the country, wheat, lumber, flour, wool, salmon, hides, hops, apples and other products of forest and mine, orchard and ranch, are found throughout the world's wide markets.

John Muir says of it, "The Columbia, viewed from the sea to the mountains, is like a rugged, broad-topped, picturesque old oak, about six hundred miles long and measured across the spread of its upper branches, nearly a thousand miles wide; the main limbs are gnarled and swollen with lakes and lake-like expansions, while innumerable smaller lakes shine like fruit among the smaller branches."

THE ROSE CITY AT THE FOOT OF MT. HOOD

The Annual Rose Festival, held in Portland in June, serves to keep the city prominently in the public eye, and the location, on the Willamette River, from a scenic point of view, is unexcelled. The terraced, wooded heights behind the city, fast becoming covered with beautiful homes, afford wonderful situations from which to view the rich panorama of river, mountain, and forest that stretches from the southern horizon to the limits of vision far to the north. The Cascade range in its great, green, wavy undulations rises to the east, cleft by the mighty gorge of the Columbia River. Here and there, projecting high above the main range, stand Mt. Jefferson, Mt. Hood, Mt. Adams, Mt. St. Helens, and Mt. Rainier, white and glittering, robed in ice and snow, and forming imperishable monuments of grandeur.

In the foreground the great city slopes down to the deep, currentless river and then rises in easy grades to the foothills of the mountains about Mt. Tabor and its adjacent elevations. The central figure of the scene is Mt. Hood, "the pride of Oregon," and it is a revelation to those who have never feasted their eyes on such a sight. The masted ships and scurrying or docked steamers betoken the large river and ocean commerce that centers here.

A LAKE IN THE CRATER OF A VOLCANO

The most curious natural phenomenon in Oregon is Crater Lake. Mysterious indeed is this lake which apparently has no outlet and into which no rivers flow and the waters of which are still pure and sweet.

Roughly circular in shape, with a diameter of five miles, the lake is inclosed by walls of igneous rock which rise from five hundred to two thousand feet above the surface of the water. Blue, deep blue and beautiful is the water, and blue it may well be, for the bottom lies almost another two thousand feet beneath.

Many centuries ago fire and lava belched forth from the bowels of the earth in the very spot where now lies this quiet lake. The volcano was probably as high as Mt. Shasta, California (14,380 feet), and the lake is still more than six thousand feet above the sea.

Wizard Island, near the western shore, is an extinct volcanic cone—a curious example of a crater within a crater. Phantom Ship, to the south, is composed of columns of rock, resembling, as the name indicates, a ship.

TACOMA AND SEATTLE

What Portland is to Oregon, Tacoma and Seattle are to Washington. Tacoma overlooks Commencement Bay, of Puget Sound, with Mt. Rainier, about forty miles distant, a great, majestic outpost. It is a picturesque city, high on a bluff above the deep blue waters that rush in and out twice a day with the tides on which are borne to the gigantic wharves the choice products of China, Japan, and the far eastern countries, and from which are shipped to the Orient, lumber, grain, cotton and manufactures in ever-increasing quantities.

Seattle is situated on Elliot Bay, of Puget Sound, about an hour's ride from Tacoma by steamer or rail. To the west, across the Sound, the Olympic Range shows its snow-tipped peaks, and Mount Rainier is seen to the south. From almost any elevated part of the city these two mountain pictures, with the calm waters of the sound lying between, provide a wonderful panoramic view. Seattle does an enormous export and import business, and its industrial and commercial growth has been remarkable.

THE LORDLY MT. RAINIER

For those who have not seen Mt. Rainier, or Mt. Tacoma as the people of Tacoma call it, it is almost impossible to imagine its majesty. It is visible, if the day is clear, long before reaching Tacoma. From all points on the Sound this grand mountain looms high over everything. If one sees it at sunrise or sunset under favorable circumstances, one has a vision such as rarely is vouchsafed mortals to see.

The region immediately surrounding Mt. Rainier has

recently been set aside as a National Park and perhaps no other area in the world brings so many and such varied natural wonders to the very doors of two great cities. It contains a total of 324 square miles, of which one hundred square miles is occupied by Mount Rainier (or Mt. Tacoma), king of mountains, rising apparently directly from sea level, and visible from almost every point in the state. No grander expression of Nature's sculptural art exists than this mighty pinnacle, 14,408 feet in altitude, whose glacial area, no less than 45 square miles in extent, exceeds that of any other peak in the United States. One of the most interesting glaciers is Carbon on the north slope, reaching down to a lower elevation than any other; the most readily reached is the Nisqually, five miles in length; and the largest is the White or Emmon's.

Photo by Brown Bros.

A Corner of Los Angeles. The lordly palm trees of Chester Place are a sight that no visitor to Los Angeles can forget.

Photo by Brown Bros.

WHERE THE GOLDEN ORANGE GROWS. The far-reaching orange groves surrounding Riverside are one of the most beautiful of all beautiful sights in Southern California, and the fragrance of the blossoms is subtlest witchery.

CHAPTER XXV

THE LAND OF THE MIDNIGHT SUN

ALASKA, STRANGE COUNTRY OF THE NORTH — NATURE'S GORGEOUS PAGEANTRY—THE OLD RUSSIAN CAPITAL—CORDOVA AND THE COPPER RIVER COUNTRY—A GOOD INVESTMENT.

A MYSTERIOUS COUNTRY there is to the north, where the aurora borealis gleams in the sky and the red midnight sun doubles back on his track when the year-tide is full.

A strange land it is, filled with contrast and charm. From the far frozen seas it sweeps south many leagues to the western islands where the warm breath of Japan fills the air. Silent snow-fields lie sleeping where no man's foot has trod. Busy towns spring to life where restless human beings dig and scramble for gold, and the roar of blasts and din of mills shatters the air, night and day. Great cold peaks lift their pallid face against skies so blue that it seems all the color in the world must have been spilled there, and painted hills of the Yukon rise like rainbows.

Newest of all the corners of the United States is this, yet ancient and quaint, with an old-world civilization transplanted on its shores a century and a half ago, in the days when Baranof was the "little Czar of the Pacific"; when the bells of the old California missions were cast in the foundries of Sitka, and Russian feet danced to Russian music in the castle on the hill.

NATURE'S GORGEOUS PAGEANTRY

Many days and long weeks would be needed to travel the length of this strange land. Over mountains, along mighty winding rivers, and out again to the sea one would go. But the "pan-handle" portion to the southeast is the threshold: and from here one may glimpse the great country.

Leaving Seattle by night, the steamers turn north with throbbing engines, like the pulses of eager soldiers of fortune, who rushed here in mobs in the gold fever of '97. Waking in the morning, one sees the green shores of Vancouver Island facing the hills of the mainland across the waterway between. The "inside passage," as it is called, winds through the protected channels of the Alexander Archipelago; and the country along these shores is storied territory, visited by the early navigators of the Pacific. Past Queen Charlotte Sound and the little stretch of open ocean, the hills grow more thickly timbered and one gets the impression of unopened country.

The boundary of Alaska begins at Dixon Entrance. And here, also, in the popular notion of the day, the reign of order ceases.

> "There's never a law of God or man
> Runs north of fifty-three."

Clinging to a hillside, with the business section along the level seashore, is Ketchikan, the first port of call in Alaska, one of the newer of the towns, built up as a center for a variety of interests. A copper district surrounds it, and there are gold prospects also.

Metlakahtla, the next stop, is an interesting example of a communal settlement. In 1887 about eight hundred Christian Indians of the Tsimpsian tribe, under the leadership of the Reverend William Duncan, abandoned their village in British Columbia in order to gain greater religious liberty and settled on the body of land known as Annette Islands. Congress later set apart this reservation for their use. A definite municipal system of government was framed, town officials elected, and a school and church founded.

After more winding of the way and sailing past green shores and foamy cataracts one reaches Wrangell, one of the oldest of Alaskan towns. A military post was established here by the United States Government at the time of the purchase of Alaska and maintained until 1887. The original route to the interior country, also, was by way of the Stikine River opposite Wrangell. There is a large sawmill located here, which sends its shingles and lumber all over Alaska. And here also are some of the oldest and most interesting of the native totem poles.

After a run through Frederick Sound and Stevens Passage, along the length of Admiralty Island, one reaches Taku Inlet and the glacier of the same name. There are two of the ice-rivers, almost side by side—splendid examples of the "dead" and "live" glaciers—one to the left, gray, dingy, receding, with the great terminal moraine between it and the sea; the other, bright, sparkling and blue, a great wall of ice jutting over the water, from which huge icebergs come tumbling with a crash like thunder, splashing the water high in air and filling the channel with fantastic shapes. The

Indians have woven legends about the latter, and call it "Sitth Klummu Gutta," the home of the spirit.

Juneau, the capital of Alaska, is a few hours' steaming from here, a pretty little town, at the foot of a towering mountain. Silver Bow Basin, behind the town, is one of the most beautiful of mountain canyons in Alaska, and is the scene of extensive mining operations.

The residence city of the great Treadwell mines, Douglas, is just across Gastineaux channel and connected by telephone and ferry. It is a progressive and growing Alaskan town, whose birth dates from the discovery of placer gold on the island by "French Pete" (Pierre Erussard), twenty-five years ago.

Big scarlet oil tanks and rows of red cottages rising from the shores of Douglas Island announce the city of Treadwell. Here is the largest gold mine in the world as to tonnage; and as to output, the second largest in the United States. This one mine alone has more than three times paid the purchase price of all Alaska. The yawning pits, or "Glory Hole," the heavy blasting, the mills grinding away night and day the year round, are all of interest. The town is not incorporated, the site being the property of the operating company.

From Haines, the next stop, started the once-famous Dalton trail to the interior, before the Skagway trail was opened. The territory of the Chilkat and Chilkoot tribes lies back of here. Fort Wm. H. Seward, just adjoining, has one of the most picturesque situations imaginable, and is the military headquarters for southeastern Alaska.

At the head of Lynn Canal lies Skagway, with various claims to interest. Historically it is the boom town that

Photo by Brown Bros.

UNDER THE SMILING SUN. Charming Avalon, on Santa Catalina Island, once a part of the east range of southern California, now isolated in the blue ocean, twenty miles off shore from the harbor of Los Angeles. Three hundred years ago when a Spanish priest landed here he found on one of the mountains a rude temple to the sun.

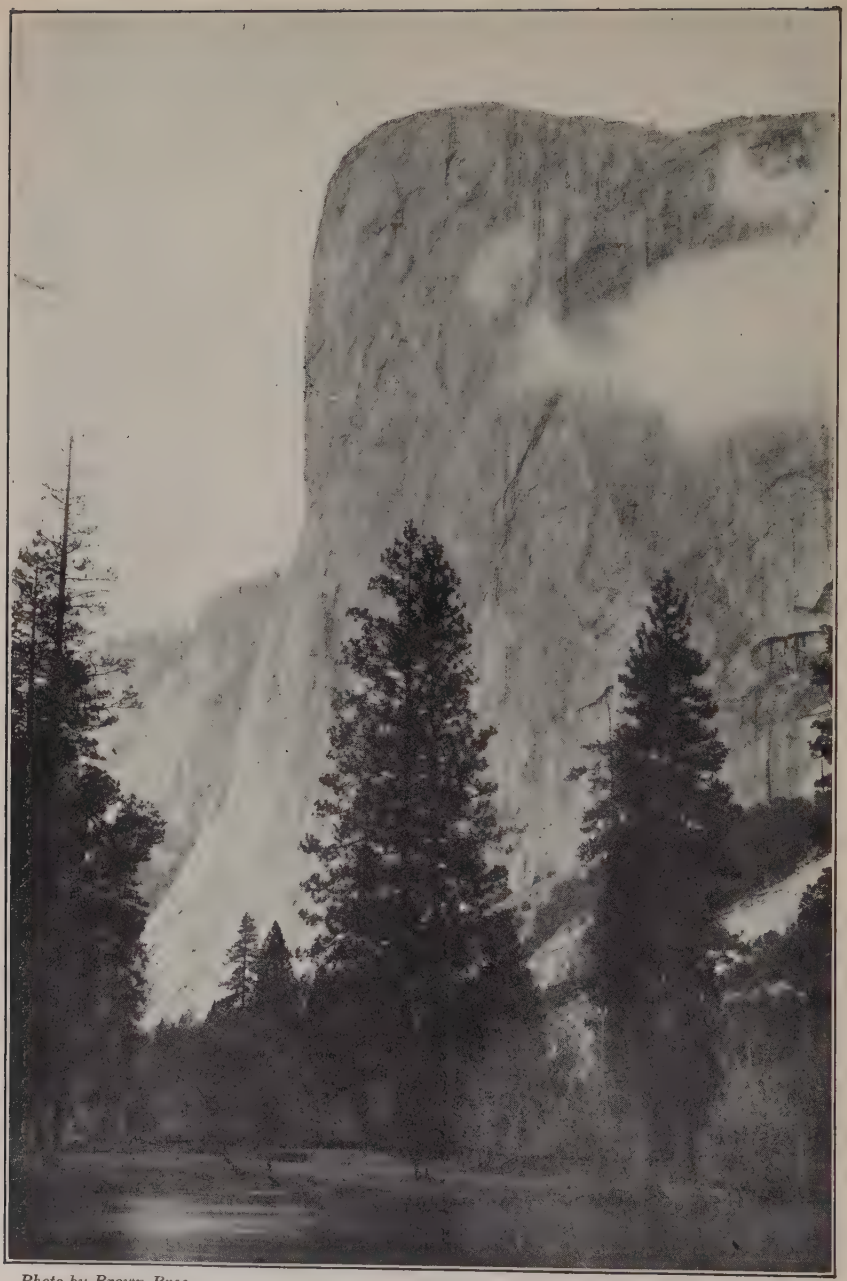


Photo by Brown Bros.

EL CAPITAN, THE SILENT SENTINEL OF THE YOSEMITE. The great cliff of solid granite towers into the clouds, majestic, beautiful.

sprang to life in a night with the route over the White Pass, and the scene of operations of the notorious "Soapy Smith" gang of desperadoes. Geographically, it is the gateway to the Yukon country, and during the summer months is filled with travelers. There are numerous hotels, curio shops, and some fine gardens. Deserted Dyea is near by; and Mount Dewey just behind, tempting to alpine climbers. The railroad trip over the White Pass and Yukon Railroad to the summit of the White Pass follows the old trail to the Klondike, and winds up to dizzy heights on the way. White Horse, on the Yukon River, is the terminus, and from here the steamers leave for Dawson, Fairbanks and St. Michael, two thousand miles down-stream on Bering Sea.

THE OLD RUSSIAN CAPITAL

Tucked away on the seaward side of Baranof Island, back of a hundred low islands, with the snowy outline of Mt. Edgecumbe looming like a dream, lies the ancient trading post of Sitka, wrapped in memories of by-gone days. The old moss-covered warehouse is there still, where piles of priceless sable, ermine and beaver were stored; the old blockhouse and the Greek Cathedral of St. Michael, with its famous Madonna, its store of rich vestments and ornament. Sitka was the seat of government of Alaska in Russian days, probably because it was more accessible to Siberia than any other town in southeastern Alaska, and it remained the capital of the territory for nearly forty years after its purchase by the United States.

Lovers' Lane, the beautiful Indian River road, winds

along by the sea, at the edge of the forest, with gay totem poles flashing out here and there, or crumbling old war canoes.

CORDOVA AND THE COPPER RIVER COUNTRY

Following the coast farther north one reaches the beautiful harbor of Cordova, the present gateway to vast copper and coal fields by way of the Copper River and Northwestern Railway, though destined to become less important when the government railways now under construction are completed. Cordova enjoys the fortunate combination of deep water and easy access to the great interior. Sheltered by forest and mountain its air has the softness of a Puget Sound atmosphere. But back of it, seaming the mountain sides, are great glacial masses. Fifty miles away are Childs' and Miles' glaciers. Along the river's edge for three miles Childs' glacier lifts its colossal face three hundred feet high. From a point back in the mountains, seventy-five miles away, its gigantic body winds along slope and chasm, ever accumulating in the range and ever losing at the river, where riven tons at frequent intervals crash down to spot the water with floes.

The road extends from Cordova up the Copper River, a distance of 131 miles, to the town of Chitina, at the mouth of the Chitina River, which flows into the Copper River from the eastward, and thence east along the Chitina sixty-five miles further to Kennecott, where is located one of the largest high-grade copper mines in the world.

From Seward, on the Kenai Peninsula, the government is working on a railroad, which will mean much to the

pioneers of Alaska and also be an interesting experiment in government ownership of a common carrier.

Of the interior, one-fifth the size of the United States, much might be written, but it is largely the land of the miner, the trader, the trapper and the pioneer; far out of the ordinary tourist route.

A GOOD INVESTMENT

Concerning the wealth of Alaska much has been reported and much yet remains to be discovered. The territory was purchased from Russia in 1867 for $7,200,000, and from that time until the close of 1912 it had produced minerals, fishing products and furs to the amount of $460,000,000. Alaska's commerce includes northward shipments of food products, merchandise, machinery, lumber, coal, etc., and return shipments of gold, silver, copper, salmon, halibut, etc. The average annual value of this growing commerce during the five years ending with 1912 was nearly fifty million dollars. In addition to this the territory produces annually some lumber, farm products, etc., which are consumed locally and as to the value of which no accurate figures are available, although it is probably about half a million dollars. The mineral wealth of Alaska is at present its most important resource, but the territory also includes extensive tracts of farming and grazing lands and many water powers. Excellent timber occurs in southeastern Alaska, while the inland forests are valuable for local use. There are also valuable fisheries along the Pacific seaboard. No matter how considered, Alaska has proved a highly profitable investment for Uncle Sam.

CHAPTER XXVI

"OUR LADY, QUEEN OF THE ANGELS"

RELIGIOUS ORIGIN OF THE NAME LOS ANGELES—THE SIERRA MADRE—A COSMOPOLITAN CITY—A GARDEN CITY—THE LONGEST AQUEDUCT IN THE WORLD—THE MISSION PLAY—THE ENCHANTED ISLE—TO REDLANDS AND THE ORANGE GROVES.

THE ORIGINAL name of the pueblo of Los Angeles, following the custom that then prevailed among the Latin races, of giving religious names to places, was Nuestra Senora de Los Angeles, sometimes written Nuestra Senora la Reina de Los Angeles—"Our Lady, Queen of the Angels." This has been shortened in our practical Yankee speech to Los Angeles. Los Angeles was founded on September 4, 1781, by a small band of pobladores, or colonists, who had been recruited in the Mexican states of Sinaloa and Sonora, and brought here under command of a government officer, to found an agricultural colony, for the purpose of raising produce for the soldiers at the presidios.

THE SIERRA MADRE

The San Gabriel Valley, which forms the amphitheater in which the city and its garden suburbs spread out, is one of the most picturesque that could be imagined. Encircling it are the foothills of the Sierras, magnificent bald mountains, standing sculpture-like against the sky,

much like gigantic sand dunes in formation, and changing in color, light and shade with every hour of the day. The Spaniards named them "Sierra Madre," "mother mountains," and the musical name has clung as have so many others that these pioneer people scattered over the lands they settled, like the fragrance of lavender among old linens.

Here is the city for those who wish to get back to nature, for here one may live out of doors the year round. Southern California, as a whole, has a climate that is almost perfect. On the coast it is cool in summer, with occasional fogs at night; farther inland it becomes warmer, and in places decidedly hot at times, though, owing to the dry atmosphere, a temperature of 100° is less oppressive than 80° on the Atlantic coast. On a winter's day the traveler may breakfast by the seashore, dip in the ocean, lunch amid the orange groves and dine in the snow-fields of the Sierras.

There is really no winter and summer in Los Angeles county. They are represented by a wet and dry season. The former is far from a steady downpour, as some suppose, and in many ways the rainy season is the pleasantest of the year. A beautiful sight is the birth of spring when the bare, brown hills are transformed by a mantle of living green.

A COSMOPOLITAN CITY

There is a delightful foreign atmosphere for the traveler who will seek it in Los Angeles, and Spanish influence still dominates the architecture of the most beautiful of the show places, although it is not to these one must go for the old-time atmosphere. To wander

through the Plaza in the original section of the city among lounging brown-skinned Mexicans or to drift into the Plaza church amid a group of devout worshipers is to live for a day at least in dear Old Mexico.

Nearby is Chinatown, less splendid than the great new Chinatown of San Francisco, but in many ways more picturesque, best visited in the Chinese New-Year season when the narrow streets and overhanging balconies are resplendent with lighted lanterns and an atmosphere of festivity penetrates even the temples. This is the time when one's laundryman—for he is invariably Chinese in Los Angeles—tucks fascinating packages of tea and delicious candied ginger into one's bundle, smiling good wishes over the snowy linen. Chinese costumes still are seen occasionally on Broadway, and Chinese shops tempt the tourist in a thousand ways.

Then there's a cosmopolitan quality about Los Angeles, born of the rubbing together of many people from far and near, for the city is still pre-eminently a tourist center, which no visitor to California ever neglects to see.

A GARDEN CITY

Of the newer sections of Los Angeles its people are justly proud, for there are a rapidly increasing number of fine buildings and the residence streets are all park-like and yet individual, even the humblest bungalow adding its quota of beauty. One must not expect to see too many flowers in the summer, but in the spring roses riot gloriously for expression, golden poppies spatter sunshine over vacant spaces and the tiniest garden spot offers its share of splendor. Geraniums clamber to the second-story, bursting gorgeously to bloom at

one's very bedroom window; peach and cherry blossoms send one dreaming of Japan, and here and there an orange tree makes one's senses faint with its perfume. Beautiful, too, are the trees of this garden city—palm trees rising high into the sky as if to lift their skirts above any possible contamination, sweet-smelling acacias, graceful pepper trees, with their delicate coral berries and their fern-like foliage flinging exquisite lace patterns on the sunny sidewalks, shaggy aromatic eucalyptus, majestic live oaks, in contour reminiscent of the cedars of Lebanon, and now and again an orange tree, never very large but always symmetrical, with glossy foliage and gleaming golden fruit.

Though pre-eminently a residence city, Los Angeles is steadily growing in commercial importance. It has recently annexed San Pedro as a harbor, and extensive improvements have been made to enable vessels of the deepest draft to come to its wharves.

THE LONGEST AQUEDUCT IN THE WORLD

This work, however, is not so spectacular an achievement as the acquirement by the city of water rights extending for many miles along the banks of the Owens River, in Inyo County. Water is now brought to the city, a distance of 240 miles, by means of an aqueduct and more than twenty miles of tunnels. This gives Los Angeles a supply of pure water from the snow-clad slopes of the highest mountains in the United States, sufficient for a population of two millions, so that not only will the city be amply supplied for many years, but there will be enough surplus to irrigate nearly all the available land in the county. The aqueduct is the

longest in the world and carries ten times as much water as all the aqueducts of Rome combined.

THE MISSION PLAY

No visitor to Los Angeles, perhaps, fails to visit Pasadena, a city of beautiful residences and rare gardens, or the ostrich farm at South Pasadena. San Gabriel Mission, one of the historic missions of California, now a landmark in a squatting half-Spanish village, where in 1915 the Mission play, recounting the early history of the state, was daily given, should not be forgotten and no one who saw that impressive little production, more like the spectacle of Oberammergau than anything America has ever produced, could ever quite forget this humble place.

THE ENCHANTED ISLE

The beaches of Santa Monica, Long Beach, Redondo, Ocean Park, Venice, etc., are all popular excursions, but the call of Santa Catalina Island is more alluring, for to discover cormorants and other strange birds and flying fish, with their wings glittering in the sun; to see the most magic of islands, all mountains and cliffs and rocky gorges, rise out of the blue waters ahead, more beautiful than Sorrento—these are some of the joys of a trip to Avalon. But the greatest surprise is the Marine Gardens, with their wonderful shell-fish, ocean forests of kelp and brilliant fishes of a thousand colors, darting like flashes of light among the miniature mountains of the sea floor. These and many other wonders of the deep are revealed by the glass-bottom boats peculiar to this place. Avalon has other attractions, too—

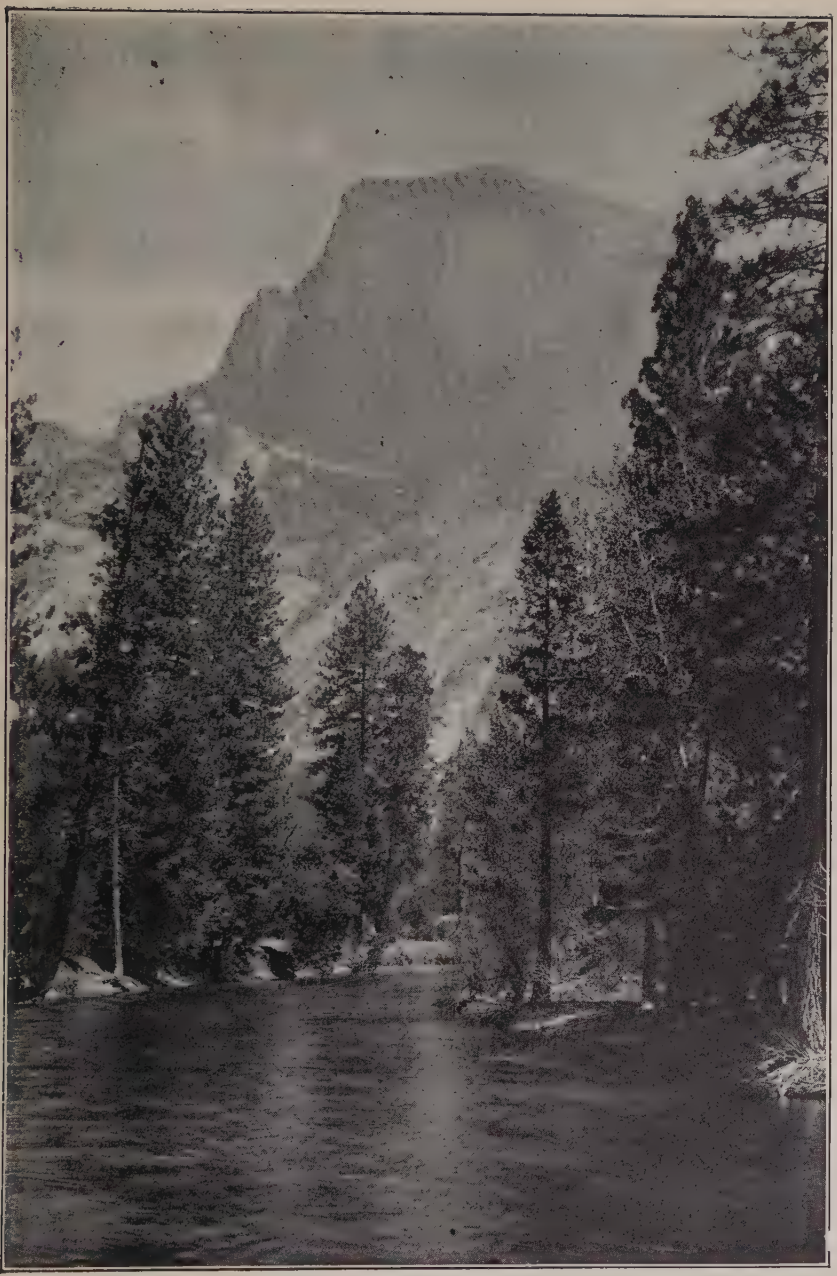


Photo by Brown Bros.

IN THE PEERLESS YOSEMITE. The strange peak, Half Dome, as seen from Merced River. The dome was filed and worn down to its present shape by the grind of an ice-cap which once passed relentlessly over these Yosemite peaks, but by what cataclysm of nature it was riven in half is one of the riddles of this stupendous valley.

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A Lordly Pillar in one of "God's First Temples." "Grizzly Giant," a redwood in Mariposa Grove, California, one of the most wonderful of all wonderful sights in the West.

bathing, of course, and fish of fabulous size. The lure of the tuna has drawn sportsmen from all over the world.

TO REDLANDS AND THE ORANGE GROVES

Chief of the longer trips to be taken from Los Angeles is that on the "Kite-shaped Track" to Riverside and Redlands, to drive through sunny orange groves and look out upon acres of them from the summit of Smiley Heights, to climb Mt. Rubidoux and worship nature at the foot of its picturesque cross, and to stay for a night at least in one of the few hotels in the land that has a distinct individuality. The Glenwood Inn at Riverside was designed and built by a Californian and has gathered to itself and celebrated all that was most beautiful in the Spanish missions of the early days. It is an enduring monument to the history of that ancient time and a place where the twentieth-century tourist may well delight to linger and find peace.

CHAPTER XXVII

THE YOSEMITE VALLEY AND THE BIG TREES

AMONG GIANT WALLS OF ROCK—YOSEMITE FALLS—THE TRIBUTARY CANYONS—TREES EIGHT THOUSAND YEARS OLD.

IN THE little valley of the Yosemite, containing only six square miles of territory, and shut in by sheer walls from three to five thousand feet high, their sides washed by wondrous sheets of water that tumble into the valley over precipices from three hundred to 2,600 feet high, is probably contained more beauty and grandeur than can be found in anything like the same limited area anywhere else in the world.

Entering the valley, the most striking object is its northwestern buttress, the ponderous cliff El Capitan, rising 3,300 feet at a very narrow part, its majestic form dominating the view. On the opposite side, forming the other portal, rise the imposing Cathedral Rocks, adjoined by the two slender Cathedral Spires of splintered granite, nearly three thousand feet high. Over these rocks on their western side pours the Bridal Veil Fall, so called because the winds often make the foaming column flutter like a white veil. Adjoining El Capitan descends the Ribbon Fall, or the Virgin's Tears, falling two thousand feet, but losing much of its waters as the summer advances. East of El Capitan are the peaks

called the Three Brothers, the highest also named the Eagle Peak, rising three thousand feet.

YOSEMITE FALLS

To the east of this peak and in a recess near the center of the valley are the Yosemite Falls, one of the highest waterfalls in the world. Yosemite Creek, which comes over the brink with a breadth of thirty-five feet, descends 2,500 feet in three leaps. It pours down a vertical wall, the Upper Fall descending nearly fifteen hundred feet without a break. The column of water sways as the winds blow with marvelous grace of motion, and the eddying mists fade into light summer clouds above. The Middle Fall is a series of cascades descending over six hundred feet, and the Lower Fall is four hundred feet high. There is a high and splendid ice cone formed at the foot of the Upper Fall in the winter. Alongside, from a projection called Yosemite Point, is given one of the best views of the famous valley.

THE TRIBUTARY CANYONS

At the head of the Yosemite, the canyon divides into three narrow tributary canyons, each discharging a stream, which uniting form the Merced. The northernmost is the Tenaya, and overshadowing it rises the huge North Dome, more than 3,700 feet high, having as an outlying spur the Washington Column. Opposite, and forming the eastern boundary of the valley, is the South or Half Dome, of singular shape, towering almost five thousand feet, and like El Capitan, at the other extremity, being a most remarkable granitic cliff. Its top is inaccessible, although once it was scaled by an adven-

turous explorer by means of a rope attached to pegs driven into the rock. It is one of the most extraordinarily formed mountains in existence, standing up tall, gaunt and almost square against the sky, the dominating pinnacle of the upper valley. Upon the southern side rises Glacier Point, giving a splendid view over the valley, having to the westward the Sentinel Dome, ending in the conspicuous face of the Sentinel Rock. Just within Tenaya Canyon is Mirror Lake, remarkable for its wonderful reflections of the North and South Domes and adjacent mountains. Some distance to the east is the Cloud's Rest, a peak rising more than six thousand feet above the valley and nearly ten thousand feet above sea-level, that is ascended for its splendid view of the surrounding mountains and the enclosing walls of the valley, which can be plainly seen throughout its length, stretching far away toward the setting sun.

TREES EIGHT THOUSAND YEARS OLD

On the stage ride to the Yosemite, the Mariposa and Calaveras groves of Big Trees are passed. These redwood trees (Sequoia gigantea) are a most interesting feature of the Yosemite region. Some of them are calculated by scientists to be not less than eight thousand years old and they occasionally attain a height of over four hundred feet, with limbs seven feet thick and cinnamon-colored bark sometimes three feet in thickness. The wood is beautiful in color, easily worked and practically imperishable.

Farther south, in the Sequoia National Park, are over three thousand of these giants, each more than three hundred feet high. Among them man is dwarfed into

Photo Ewing Galloway.

San Francisco, the Guardian of the Golden Gate. Looking across the bay toward Berkeley Mountains. In the beautiful city of Berkeley is located the University of California.

Photo by Brown Bros.

A Busy Place. Market Street, near Powell, San Francisco.

insignificance indeed, and his lifetime seems an inconsequential period in comparison with theirs. Stung to reverence by their majesty it is not difficult to believe that

"The groves were God's first temples"

or that man before he fashioned the great cathedrals of the world received inspiration in natural wooded aisles.

CHAPTER XXVIII

THE GUARDIAN OF THE GOLDEN GATE

SAN FRANCISCO, THE PHŒNIX CITY—A GREAT SEAPORT—BEAUTIFUL BERKELEY—COSMOPOLITAN GAYETY

WHEN THE Franciscan monks built their chain of monasteries along the coast from San Diego north, looking over the beautiful panorama of mountain-girded bay, rolling hills and flowering valleys, they gave to the settlement about which the great city has grown up the name of their beloved saint, San Francisco. Built upon numerous hills, many of which bear names that have become famous in the days since the first discovery of gold, the city rises above a bay dotted with islands on the shores of which the sunny lowlands and foothills reach back to the mountains whose summits are veiled in mist.

THE PHŒNIX CITY

Although almost completely annihilated by the quake and fire of 1906, San Francisco is today a better and more interesting city than ever before. The results which have been accomplished in so short a time are not only marvelous, but astonishing, and the masterful public spirit, so plainly evident on every hand, is proof that San Francisco always expects to wield the scepter of commercial supremacy on the Pacific Coast. Much of the city's pre-eminence is due to its location on San

Francisco Bay, which affords one of the finest harbors in the world, extensive enough in area to house innumerable fleets, and well enough protected by the surrounding hills to make it well-nigh impregnable.

A GREAT SEAPORT

As a result of its location as related to the trade of the Pacific, San Francisco is the first city of California. It is the natural gateway to and from Hawaii, Samoa, Australia, the Philippines and the Orient, and is the railroad center and commercial metropolis of the Pacific Coast, and one of the great seaports of the United States. Ships of every nation are seen in its harbor.

Its export trade has grown in recent years to unexpected proportions and regular lines of steamships to Honolulu, Nagasaki, Yokohama, Hongkong, and Manila, down the coast to South American ports, and north to Portland, Tacoma, Seattle, Vancouver and Alaskan ports, leave the city wharves at regular intervals. The opening of the Panama Canal found San Francisco ready for new ventures, and the Panama-Pacific Exposition found a fit dwelling-place here.

BEAUTIFUL BERKELEY

Across the bay at Berkeley is the University of California, the state university, attended last year by more than eight thousand students, and second only in size to Columbia. The campus with its magnificent old oaks, the natural beauty of its background of rounded hills commanding a clear sweep of the bay and Golden Gate, its beautiful Greek Theater and graceful Campanile make it famous among institutions of learning.

COSMOPOLITAN GAYETY

San Francisco itself is a city of cosmopolitan gayety, whose people love to gather in brilliant cafés and move in body and spirit to the movement of the latest dance. This Paris of the West is beloved of many tourists, and its quaint Chinatown alone, with its exotic appeal, is known from one end of the country to the other.

Courtesy of the Canadian-Pacific Railway Co.

THE CRADLE OF NEW FRANCE. On the site of the Chateau Frontenac (at the right) stood the Chateau St. Louis, built by Champlain. In the distance rolls the majestic St. Lawrence.

Courtesy of the Canadian-Pacific Railway Co.

CANADA'S EASTERN GATEWAY. The great fortress and port of Halifax, Nova Scotia, through which flows a large part of the commerce of the Dominion.

CHAPTER XXIX

FRENCH CANADA AND THE EASTERN PROVINCES

QUEBEC, THE CRADLE OF NEW FRANCE—NOVA SCOTIA —THE LAND OF EVANGELINE.

UPON THE Rock of Quebec, at one time or another in two centuries of struggle, there have stood the rulers and the ruled, the impetuous and picturesque French adventurers and the inscrutable, self-sacrificing, obedient priests, the gallant representatives of a line of French kings and the corrupt administrators of colonial wealth, the reckless and the wise, the chivalrous and the mean, the statesmen and the soldier—all the moving panorama of men who looked out over a wide continent upon the wild struggles of a scattered and proud race of savages, upon the rivalries and warfare of two great European powers in a world still fresh from centuries of solitude, upon the birth-pains of two new nations in process of creation.

Near the Quebec of the future on the banks of the St. Charles, Jacques Cartier and his sailor comrades in 1535–36 passed a season of severe privations and were the only white men living upon the whole continent of North America. Here, on May 3, 1536, Cartier erected a cross thirty-five feet high bearing a shield with the fleur-de-lys and the inscription in Latin: "Francis I, By the Grace of God, King of France."

At the foot of the Rock of Quebec Champlain planted on July 3, 1608, the white flag of France, built his "Abitation" and founded the city of the future.

In founding this seat of future empire, in organizing a base for expeditions and explorations of whose results he could have no real conception, Champlain selected the site of Quebec as being also most defensible from a military point of view and best fitted as a port for purposes of the fur trade and shipping interests. At the foot of the cliff, amidst a forest of birch trees, he built himself a house—on the spot where the Church of Notre Dame des Victoires now stands. It was in reality three separate houses, joined together, with a courtyard, storehouse, watch-tower and an esplanade in front, guarded by five cannon with palisades and a ditch sixteen feet wide and six feet deep.

In 1620 Champlain commenced the erection of the Fort or Castle of St. Louis on the brow of the cliff overlooking his "Abitation" (the corner of Dufferin Terrace near the present post-office), and this famous building, or its successor, remained the palace of the Governors of New France until the final cession of the country to Great Britain. From this new seat of authority Champlain, as representing in turn the company, the viceroy and the king, watched the rivalry of the Récollets and Jesuits in the missionary work of the time; from here he guided and modified the jealousies of the infant colony which, at his death in 1635, still numbered only a hundred souls; from here he watched and assisted the fur traders in their dangerous but attractive and lucrative occupation; from here he planned and carried on expeditions which gave vast territories to the Crown

of France and immense funds of geographical knowledge to the world; from here he departed on constant missions to Paris in the vain effort to hold in one stable policy of trade and settlement and acquisition, the conflicting interests of Court and Church and the selfish rivalries and intrigues of men and women working for evil ends; from here he led French soldiers to fight side by side with the Hurons against the Iroquois. Here, also, Champlain's beautiful young wife supported him with her sympathy and helped the settlers with unselfish labors for their welfare.

This Fort and Chateau of St. Louis saw many a scene of interest in succeeding years. As the settlement grew in numbers and importance—Quebec was always more influential than the size of its population would have warranted in a European or Asiatic town—the Chateau became the center of a varied and changing history and the home of men with many-sided qualities and performances. If its walls could live and speak their tales of council during this period the result would hold high place in the pages of romantic history.

MODERN QUEBEC

The fortunes of Quebec rose and fell—rose to the golden age of the city during the reign of Louis XIV, fell with Montcalm on the Plains of Abraham. In that battle Quebec lost her prestige as the capital of a vast New France and became for a time one of the outposts of British military power.

By another transformation under a new flag, and developed through the rapidly passing footprints of British governors and Canadian politicians, French

Canadian agitators and "patriots," popular and unpopular leaders, a part of the French Canada of the past became once more centered at Quebec as the provincial capital in a preliminary union with Upper Canada, 1841–67, and then in a wider and greater Dominion of Canada. Through all these later stages it remained a center of the storm-cloud of politics or insurrection, of legislation and administration. It was also the home of French thought in Canada, the pivot of literary activity, the seat for many years of a great lumbering industry with Cap Rouge as its central point, the home of ship-building for another period at the mouth of the St. Charles, the seat in St. Roch of immense tanneries which have largely passed away, the present home of a most important boot and shoe industry. Interesting sights of the modern city are Wolfe's Monument, the Wolfe-Montcalm Memorial, the Champlain Monument and a Memorial of Queen Victoria. Outside of the city are Memorials of Jacques Cartier at the junction of the St. Charles and Lairet, of Murray and De Lévis on the Ste. Foy Road, of Father Massé at Sillery.

This modern Quebec, which curious and interested travelers from all parts of the continent delight to visit, still retains much of its old-time color and character, though much, alas, has passed away. The gates of the city have gone, though large stretches of the ancient walls remain, and in one or two cases adaptations of the gates have been built to convey an idea of their nature and significance.

The commercial age has come upon the city. Street cars and trade dislike narrow gates and they had to go;

modern buildings require space and in some cases they have replaced most ancient structures. But none of these things have or can affect fundamental conditions—the wonderful site of the city, the old-time twistings and turnings of its narrow streets, the steep grades of its Upper Town, the characteristics of its ancient and modern religious structures, or the exquisite view of nearby river and distant hills, of winding waters and beautiful valleys and picturesque villages. Dufferin Terrace, one of the finest promenades in the world, and the Chateau Frontenac, one of the world's great hostelries, have, it is true, replaced the ancient chateaux and government edifices of the past; the post-office of today stands where an Indian fort was built in 1649 to house the flying Hurons from their ruthless Iroquois foes; the present Roman Catholic Seminary and Laval University stand where Louis Hébert cleared the ground and erected the first humble house upon the cliff in the shadow of the Chateau; the City Hall stands where the Jesuit College once sent out or received with open arms the missionaries and explorers who held the varied parts of a new continent within their purview, which trained others for similar work and then for a century echoed to the tread of British soldiers; the Quebec Bank stands where the Lymburners in British days had famous offices and in its vicinity a British barricade was erected in 1775 to oppose the advance of Arnold's forces; Frontenac Park was the site of the Bishop's Palace which once overlooked Prescott Gate and in latter days it was the home of the Parliament Buildings which preceded those of the present time; Boswell's Brewery has replaced the walls of the

Intendant's Palace which was erected in 1655 by De Meules who succeeded Talon in that office—in Bégon's days twenty buildings were grouped around the main structure.

Still, much remains in the most ancient historic sense. St. Louis Street, in its quaint buildings and narrow roadway, shows the house where H. R. H. the Duke of Kent lived in 1791–93, the old-time residence of Chief Justice Sewell and various lieutenant-governors under British rule, the house where the remains of General Montgomery were deposited. Down below the Citadel and the modern Chateau, at the foot of the cliff, there are myriad tokens of an olden day. The Church of Notre Dame des Victoires stands upon the site of Champlain's "Abitation" and every foot of soil and street teems with memorials of the past. In front of the church—the plural style was assumed in 1811 after the projected siege by Admiral Hovenden Walker had been abandoned—stood in early days the pillory and, within the square, the scaffold for executions used to be erected. The church itself dates from 1648 and was partially destroyed by shot and shell in 1759. The first church in Quebec stood at the head of the curious little place called the Cul-de-Sac and was destroyed at the siege of 1629.

Champlain Street extends from the base of Cape Diamond, where it touches the market place, still noted for its Saturday sale of products by *habitants*, to the city limits and includes the one-time business center of the town, the old Guard House and the remains of the ancient inner harbor of Quebec. On the Charlesbourg Road, not far from Quebec, are to

be seen the remains of what is popularly called Chateau Bigot. Tradition has woven round this old mansion various romantic tales of love and cruelty fitting to the life of Intendant Bigot, but the facts appear to be that it was built by Intendant Bégon (1712–26) who was quite a different man in both character and fame. Elsewhere in the city there are varied quaint and tortuous streets peeping out of modern thoroughfares and reminding the casual visitor that Quebec once held a vivid place in the making of American history.

ACADIA—THE LAND OF EVANGELINE

The Canadian provinces of Nova Scotia and New Brunswick, the Islands of Cape Breton and Prince Edward, with a portion of the State of Maine east of the Kennebec River, constituted the Acadia, or La Cadie, of the early French explorers, of the earliest French settlement in America, of one hundred and fifty years filled with the sorrow and suffering, the struggle and success, the darkness and brightness of pioneer life. Four years earlier than the foundation of Quebec, Champlain and De Monts started, on a small island in the St. Croix River, a settlement which, in the following year and after varied hardships, had to be transferred to Port Royal—not far from the site of a later place of the same name, now known as Annapolis Royal.

There, on the north shore of the Annapolis River at its junction with the Basin, a small fort was erected and the first village commenced in all the vast region which was to later on fly the flag of France. Back of these settlers was the primeval forest, around them

and throughout the Acadia of succeeding centuries were beautiful rivers and brooks and streams, exquisite valleys and scenery of the milder type, shores washed by seas which swarmed with fish, soil which ripened readily into production and the growth of flowers and fruit. The Indian life of the woods was, fortunately, not of the fierce type so characteristic of the forests and lakes of the far interior and the upper St. Lawrence, but it was at times wild enough.

The site of Port Royal was a beautiful one and in the summer of their hopes and of their first settlement its sunshine and softness of air, its sentinels of rock serving as a shelter against storms from sea, its wooded hills guarding the colonists from storms by land, must have made it seem a very haven of rest to the inexperienced, light-hearted, optimistic Frenchmen. The years that immediately followed were of stirring and ever-changing interest. Port Royal became the center of storm-clouds which reached in shadowy outline from Paris to London and back again to this tiny settlement on the verge of a vast continent. During the next few years the political fortunes of the colony ebbed and flowed with surging conditions in France until, in 1613, a fresh expedition was sent out from France and a new settlement called St. Laurent was made farther down the coast.

At this point and in connection with the elaborate and widely extended, though necessarily vague, charters of the French King, there commenced the hostile and historic antagonism of the English colonists to the claims and ambitions and power of New France. Argall, a military leader from Virginia, sailed in the same year

Courtesy of the Canadian-Pacific Railway Co.

A City of Tides. The tides in the Bay of Fundy cause an odd phenomenon at St. John, New Brunswick, the water rising from 6 to 12 feet above the level of the river at flood tide and falling as much below it at the ebb.

Courtesy of the Canadian-Pacific Railway Co.

THE CITY OF CHURCHES AND COMMERCE. A glimpse of the Place d'Armes, Montreal, the beautiful city under the shadow of Mount Royal.

into the harbor of this new settlement and uprooted it. He followed this success by a raid upon Port Royal, which he found defenceless—Biencourt, the gallant son of the adventurous Poutrincourt—being engaged in an expedition against the Indians. The place was pillaged and burned to the ground and even the crops in the fields destroyed. Argall returned in triumph to Virginia and the unhappy French colonists struggled through the ensuing winter by means of wild roots and the help of half-starved and friendly Indians. The name of Charles De la Tour is written large upon the annals of Acadia. Though ill-supported by the French government, he recovered Port Royal and held Acadia for France through many vicissitudes until the colony was overrun by an English expedition and held until 1667, when it was returned to France by the Treaty of Breda. From then until 1710, when the finger of fate placed its seal upon the country and made it finally British, the land rested in comparative peace. In 1744 an effort was made to capture Annapolis Royal, as Port Royal was now called, and it was defeated.

The grass-grown ramparts of this historic fort may still be seen amidst surroundings which are both beautiful and romantic. Annapolis Royal stands on the south shore of Annapolis Basin with its sapphire waters and turquoise sky, its picturesque and peaceful scenery belying the record of the past. The well preserved and ancient fortifications cover thirty acres of land, with old cannon and buildings which speak volumes as to the centuries of struggle that are gone, and a bronze statue of De Monts looking down and back over three hundred years of history. Back of the modern town

is the river, which winds its way seventy miles into the interior through one of the most beautiful and fruitful regions of the continent—the famous Annapolis Valley, with its sea of apple blossoms in June, its blaze of scarlet and golden fruit in September, its ever-exquisite scenery and sweetly-scented air. It is difficult in this atmosphere of peace and contentment and quiet prosperity to think of the war-drum and flaunting flags and roaring cannon, but to do so is interesting and the result inspiring. Passing from this historic spot, one comes naturally to the Bay of Fundy with its famous tidal phenomena, its shores which hold still more famous memories of Acadian life and expulsion, its mighty promontory of Blomidon with the stormy ocean in front and the lovely vales of Evangeline's story and Grand Pré annals behind it:

> This is that black bastion, based in surge,
> Pregnant with agate and with amethyst,
> Whose foot the tides of storied Minas scourge,
> Whose top austere withdraws into its mist.
> This is that ancient cape of tears and storms
> Whose towering front inviolable frowns
> O'er vales Evangeline and love keep warm,
> Whose fame thy song, O tender singer, crowns.

After the conquest began the evolution of the romantic yet sorrowful Acadian question. The people of French extraction, during the years of peace which followed, increased largely in numbers and certainly did not decrease in their sentimental loyalty towards France.

On the other hand, Colonel Lawrence, the British Governor, found himself dealing with a most difficult

problem. There was in those days little to give a conquered people in the way of constitutional liberty and self-government; such a thing was unheard of and not thought of in any quarter. There was always possible a new war in Europe or fresh complications in America and the rivalry of France and England was very real and very bitter; the Acadians were restless and dissatisfied and might easily become more so with probable Indian support in case of an uprising; as time passed on French claims from Quebec became more active and French support to Acadian sentiment more obvious; New England dislike of the Roman Catholic side of Acadian life and of existing treaty rights was constantly expressed; Halifax, after its foundation by Cornwallis in 1749, became very quickly a power in the Provinces and an influence with the Governor which was naturally along the lines of developing a powerful British Province; while the English troops available were not enough in number to hold the region if they were to be girdled by a hostile population.

Colonel Lawrence, in his official letter to the governors of the other English Colonies, explained the policy of expulsion as finally decided upon in 1755 after Fort Beauséjour had been besieged and captured by 2,000 troops from New England and Fort Gaspereau also taken. He declared that every opportunity had been given, in fact reiterated requests made for the Acadians to take the oath of allegiance in return for the retention of their lands and possessions; that this was unanimously refused even in face of the threatened alternative of expulsion; that if the people would take this attitude

at a time when there was a large British fleet on the coast and a large land force in the Province, what would they not do when, in the coming winter, the small British population was left unprotected by the fleet and unguarded by the New England troops who would have to return home. What followed was one of the most drastic measures recorded in history.

The total number removed was about 6,000, of whom 2,242 went from Minas, 1,100 from Piziquid, 1,664 from Annapolis and 1,100 from Chignecto. The arrangements were made with sternness and secrecy, the operations were carried out in the summer season with, it would seem, a minimum of hardship, and within a few months the unfortunate Acadians were dispersed amongst the English Colonies to the south. Every effort appears to have been made to keep families together and to preserve the precious lares and penates of the households. Much hardship, however, was unavoidable and many stories of individual suffering were afterwards told; the beautiful village of Grand Pré was given to the flames, though destined to be rebuilt in after years, to be the home of a very few returned Acadians and to be the birthplace and home of Canada's Prime Minister of 1913. In succeeding years, after the fall of Quebec and New France, many of these people drifted back to their old homes or to new ones built on the ruins of the old or, in the main, to the shores of St. Mary's Bay on the west coast of Nova Scotia. Today their descendants constitute over 150,000 of the best, most peaceful, most loyal-hearted inhabitants of a Province of British Canada while their story lives in literature and romance and history. The gentle,

attractive, courteous character of the Acadians, the lovely little cottages of the people, the happy valleys and villages in which they dwelt have been immortalized by Longfellow in an alien language and from the very land which the Acadian himself detested.

Nova Scotia is practically an island. Like that part of the United Kingdom whence it derives its name it has many bays and harbors on its jagged coast line. Of these Halifax probably is the best known for its boating and aquatic sports. Yarmouth, with its beautiful Hawthorne hedges, is another well-known Nova Scotian sea port. There are many smaller ports such as Digby, Weymouth and Truro.

While Grand Pré is the actual locality named by Longfellow as the home of Evangeline, Wolfville with its university and seminary is the real station on the Dominion Atlantic Railway for Evangeline Land. Here one may in fancy visit the site of the home of Evangeline herself, the forge of Basil, the site of the church and of Father Felicien's dwelling. Every foot of the ground will breathe the incense of romance and history, and the group of ancient French willows will leave their image indelibly on the memory.

Indeed, this Land of Evangeline and the closely associated portions of Nova Scotia is acclaimed by thousands of tourists who yearly go there for their summer vacations. It has within itself all of the elements that rejuvenate. Within itself it has the delights which go to form the complete equipment of a resting place during the torrid mid-year months when city life becomes burdensome.

CHAPTER XXX

INDUSTRIAL CANADA

MONTREAL, CITY OF CHURCHES AND COMMERCE—TORONTO, CHIEF CITY OF ONTARIO—FORT WILLIAM.

ONE OF THE oldest and most interesting cities on the continent is Montreal. Its attraction is not alone due to the fact that many of the streets are very old and narrow, or because here and there is pointed out a building whose thick walls and ancient architecture indicate historic associations, or because in it now center the export trade of Canada and its greatest transportation interests. These things have their place, of course, as have the many severe-looking ecclesiastical and educational edifices, the handsome churches, the splendid homes of a more solid character than the flimsy, fantastic structures of modern fancy, the noble vistas of earth and sky and water which appear at various points and which, from the top of Mount Royal, concentrate in one of the finest panoramas in the world. These are all attractive; but to the thinking traveler, to the artistic mind, to the real student of the times and therefore of other ages as well, Montreal is primarily interesting because its history and associations, its races and its languages, combine the past with the present and merge the civilization of Europe, under Louis XIV, with that of the New World in a commercial age and under a dispensation of democracy.

When the first French navigators and explorers sighted the scene of this Canadian metropolis of the distant future, it was a spectacle of wondrous curiosity and beauty. The Indian town of Hochelaga—where Sherbrooke and Metcalfe Streets afterwards stood—was surrounded by waving fields of maize and rice and great forests of oak and maple; the view from the mountain which faced Cartier in October, 1535, as he gazed far out from the threshold of an unknown world was rarely beautiful and picturesque.

Champlain was especially charmed with the scene and explored the region upon several occasions. Upon his first visit he thought the opening in the waters was, at last, the route to China; hence the Lachine of a later date. The Island of Montreal he examined carefully with a view to settlement, and named the point where the Custom House now stands "La Place Royale" and the large island below as Ste. Hélène, in honor of his wife. For many succeeding years nothing further was done and the site of Montreal remained the scene of an occasional visit from a fur trader or the camp of some wandering band of Indians. It did not, however, escape the keen observation of the Jesuit missionaries and, finally, their reports interested a number of notable people at the court of Louis XIII. The Company of Notre Dame de Montreal was formed with Jerome le Royer de la Dauversière as Director. Upon the advice of Father Lallemant, of Jesuit fame in the distant colony, Paul de Chomedey, Sieur de Maisonneuve, was selected to head the expedition into the wilderness, and he left La Rochelle in the spring of 1641 with two tiny sailing ships, and thirty-seven

men, Father La Place, and Mdlle. Jeanne Mance—who was to establish and take charge of a hospital. It was on May 18, 1642, that the landing took place at the Place Royale of Champlain and that the founding of Ville Marie de Montreal was inaugurated.

Thus commenced the Canadian city of churches and commerce.

Great care was taken as to the first immigrants in respect to character, habits and physique. Gentlemen of good family came to the settlement, and Testard de Montigny, Jacques Le Ber and Charles Le Moyne built houses; the members of the Seminary of St. Sulpice were created Seigneurs of the Island with the quaint designation of the Gentlemen of St. Sulpice; a fortified mill was built by the latter at what was known in modern days as Windmill Point and another on the site of what is now Dalhousie Square. Family after family came from France, and as conditions improved and knowledge of the climate increased, the very large infant death-rate of the earlier years decreased and the population grew apace.

Other eminent names of this period—men who helped to make and keep Montreal or to record its conditions and sufferings in the period of Indian struggle—were Robert Cavelier de La Salle, the great explorer, whose home in 1668 was on the corner of St. Peter and St. Paul Streets; Gédéon de Catalogne, the engineer who projected the first Lachine Canal; Pierre de la Vérendrye, the western explorer.

On the west half of the Bonsécours Market stood for many years the Palace of the Intendant. It was a headquarters of Bigot, Cadet, Varin, and the scene

of many rascalities; it was also the home of better men, and for a time, after the Cession, was occupied by Sir John Johnson, the famous Loyalist. An old stone building, still standing (according to W. D. Lighthall, an authority on Montreal's history and traditions) on the corner of Friponne Street, was the French government warehouse in which Bigot and his associates carried on many of their frauds and which, like the similar building in Quebec, was labelled "La Friponne" or "The Cheat." On Coté Street the Christian Brothers now occupy a house which was the home of another of the famous Le Moynes—De Maricourt. At the corner of St. Antoine and St. Margaret Streets still stands the house where Daniel de Beaujeu, "the hero of the Monongahela," and his family lived. He was the French officer who did so much to cause Braddock's defeat in that memorable fight. On Jacques Cartier Square, where St. Paul Street crosses it, was the house built and occupied by Du L'hut the explorer, and founder of the city named after him as Duluth. Long afterwards there was erected on the same site the mansion and gardens where the last French governor—the Marquis de Vaudreuil—lived in the splendor which characterized the times. Here came Montcalm and De Lévis in those last tragic years of French rule; here came the Le Moynes, De Beaujeu, Bourlamaque, De Bougainville and many others; here was the miniature court with its guards of honor in their brilliant blue and white uniforms. On St. Sacrament Street stands the house once occupied by the Marquis Chartier de Lotbinière, the engineer-in-chief, under Montcalm, of fortifications at Ticonderoga and Isle-aux-Noix.

Passing from the revival of individual names with which the early history of Montreal is associated, one naturally thinks of the long period of one hundred and fifty years in which the struggling settlement, village and town had to face the constant fear and stern, though intermittent, reality of war with the Iroquois. It hung over the whole life of the people like a pall, though French characteristics of light-heartedness in many cases and the inborn, inbred, religious feeling of the community in other cases, enabled them to often rise above it. It is a record of war today and peace tomorrow; of surprises and raids and massacres; of captures, tortures and frightful death. The fighting was desultory though fierce, and its history is more or less a recital of individual incident, of personal heroism. of gallant endurance of sufferings.

With the final scene of the war drama closed by Wolfe and Montcalm on the Plains of Abraham and sealed by De Vaudreuil in the surrender of Montreal to the British on September 8, 1760, Generals Amherst, Murray, Haldimand and Carleton took the place of the brilliant leaders of French Canada; the dejected soldiers of France, who numbered about four thousand, were sent back to Europe; and a new era in the history of Montreal as well as of America was inaugurated. One cannot now look around this City of the Saints, this home of the Church, this center, also, of a brilliant French social life, without noting that despite the influence of modern commerce and the financial dominance of the English in later years, it is still a French and a Catholic city. Many portions of it breathe association with that period which has been called the

Heroic Age of Canada and of those years when, at times, the blood of even the bravest soldiers ran like water in their veins.

There, on La Place Royale, is not only the site of the landing of Champlain and Maisonneuve, but the site of the first public square where French executions took place and which, in 1676, the Seigneurs of the Seminary granted to Ville Marie; here, on the Commissioners Street of today, stood the Fort de Ville Marie, succeeded in 1686 by the home of M. de Callières, and near by was the first Manor House of Montreal and residence of De Maisonneuve. The Place d'Armes, where now stands the statue of its founder, was the center of the city's earlier life, and facing it stands today the Notre Dame parish church, the chief religious structure of the French people in Canada. Adjoining it is the quaint old Seminary of St. Sulpice, erected in 1657; through the site of the Bank of Montreal building there once passed the stone-bastioned walls of ancient Montreal—extending from Dalhousie Square to Commissioners Street and thence back to the Square. They were commenced in 1721 by Chaussegros de Léry and demolished in 1817. Craig Street, by the way, was in early days a swamp with a little river running through it. On Jacques Cartier Square was the original Place des Jésuites, and adjoining it was the monastery where Père Charlevoix, the historian of New France, lived for many years. Here, also, four Iroquois prisoners were tortured to death in 1696 as a stern reprisal on the part of De Frontenac for continued Indian atrocities and as a warning for the future.

Between Notre Dame Street and the Harbor is the

oldest part of Montreal—St. Amable Street, for instance, is fully a century old and most antique in its structure. In this neighborhood is the Chateau de Ramézay, built in 1705 by Claude de Ramézay, eleventh Governor of Montreal, and afterwards occupied by various British governors up to the time of Lord Metcalfe. Under De Ramézay it was a place of great hospitality and entertainment; it was long afterwards the headquarters of the Continental Army under Montgomery, of the American Commissioners in 1776 (Benjamin Franklin, Carroll of Carrollton and Samuel Chase); of Benedict Arnold for several weeks. It was the home of the first Canadian printing press brought over by Franklin and operated by Fleury Mesplet. It is now the home of the Numismatic and Antiquarian Society and the premises constitute an excellent memorial of the old-time thick-walled, defensive structure prepared for emergencies and constructed when large wine cellars and immense fireplaces were the vogue. Dalhousie Square is the site of what was called the Citadel, erected in 1685; where the Fire Station now stands there lived the first British governor of Montreal—Thomas Gage, who afterwards kept New York for the Crown throughout the Revolution. All these and many more memorials of a picturesque past are a part of the life of French Canada; they should be an inspiration to the youth of all its future.

Of the English *régime* in Montreal much might be said. Its first portion at least was picturesque. Upon Bonsécours Market there stood for many years the home of Sir John Johnson, British Indian Commissioner and son of Sir William Johnson; here, also, lived

General Ralph Burton, second British governor of Montreal. On St. Gabriel Street were the famous Northwest Fur Company's stores, and in them centered enough adventure, discovery, and stormy incident and trade to fill volumes; hither, at times, came Sir Alexander Mackenzie, Simon Fraser, Alexander Henry, J. J. Astor, Washington Irving, McTavish, Franchère and all the strong, sturdy, rough and capable men who followed the French pioneer period with another of wide discovery and sweeping accomplishment. In Montreal centered, as a matter of fact, the great fur trade of the eighteenth century, and Alexander Henry lived on St. Urbain Street, Mackenzie on Simpson Street, and Simon Fraser not far away, while Simon McTavish built a great house on Mount Royal (owned as a property in recent years by James B. Allan), and on the slope above Victoria Square lived Joseph Frobisher, one of the founders of the Company. The American wars left, also, their impression upon Montreal. In 1775 the city surrendered to Montgomery, the commander of the Continentals, and during the winter of 1776 remained in possession of the Americans. General Montgomery, Benedict Arnold, Benjamin Franklin, Ethan Allen, were figures familiar to the history of that period in Montreal. In 1777 Sir Guy Carleton and the British troops re-occupied Montreal, and Dorchester Street stands today as a lasting memorial of the man who as General Carleton and Lord Dorchester did so much for his country's flag in America.

From days of war and fur trading the modern city grew into an age when transportation was the great factor and element in a new national life which Montreal

helped to create and helped to maintain. John Molson, in 1809, launched the first of Canadian steamboats—the second on the continent. From Montreal, half a century later, came the inception and operation of the Grand Trunk Railway; in Montreal originated the Canadian Pacific project and in that city has since centered the great wealth created by its success and employed, in part, so wisely and well by Lord Strathcona, Lord Mount Stephen, Sir William Van Horne, Sir Thomas G. Shaughnessy and other financial magnates. In Montreal centered the operations of the Bank of that name, while the personality of James McGill is cherished in the institution of learning which he founded and which has had so great a sphere of usefulness.

In more recent years the spirit of commercialism, of the new age which has come to the civilized world, has had its effect in Montreal as it has everywhere upon this continent. The corruption of Bigot under French rule has been succeeded by the corruption of the notorious "Twenty-Three" under modern conditions; city government has not always been of the best, here as elsewhere. But Montreal remains one of the great picturesque centers of the New World and combines in itself much of the good of olden days with the swiftness, speed, and onward rush of the present.

TORONTO, CHIEF CITY OF ONTARIO

In the days before the white men came to Canada the site of this progressive and interesting city was a rendezvous among the neighboring Indian tribes and they called it *Toronto,* a meeting place. Its first appearance in history occurs in 1749 when the French built a

small fort and called it Fort Rouille. They also established a trading post, but soon came into active competition with the British, who caused them to burn the fort to prevent its capture by their foes. A year later the seat of government of upper Canada was transferred to this point and the new capital named York for the second son of King George III.

Block-house forts were erected to guard the harbor, barracks for the garrison and buildings for the legislature built and the city entered upon the second stage of its career, which in the next thirty years was to prove a stormy one. Twice sacked in the War of 1812, the buildings of the legislature were burned to the ground and the town pillaged. After peace was restored the town had almost to be re-erected.

In 1830 Upper Canada College was established and this gave a great impetus to the city and province. In 1834 the population had reached the 10,000 mark and an act of legislature conferred upon it a charter of incorporation with a mayor, alderman and councilmen. Under this charter it was constituted a city with the name of Toronto.

The city of today is one of fine residences, impressive government buildings for the provincial parliament, and of many educational institutions, chief among which is the University of Toronto with its affiliated colleges. Industrially the city is one of the chief manufacturing centers of the Dominion. Its situation is favorable to commerce and the largest lake vessels can enter its harbor. The city is the outlet of a rich grain district and rivals Montreal as a financial center.

From the city radiate railway and steamship lines in all directions. Lake Ontario provides many interest-

ing trips and not far away are the lovely Muskoka Lakes and Georgian Bay districts with their thousands of islands, Point au Baril, and the famous fishing grounds of French and Pickerel Rivers, resorts which attract many visitors annually.

FORT WILLIAM

Fort William is at the mouth of the Kaministikwia River, a broad deep stream with fine banks affording extraordinary advantages for lake traffic. From the beauty of situation, accessibility and the opportunities for sport in the neighborhood, Fort William and Port Arthur have become favorite resorts for tourists. A long promontory of basaltic rock on the opposite side of the bay, called the "Sleeping Giant," whose Indian legend takes one back to aboriginal days, terminates in Thunder Cape, behind which lies the abandoned Silver Islet mine, which yielded almost fabulous wealth before it was flooded. Pie Island, another mountain of columnar basalt, divides the entrance to the bay, which is flanked on the west by Mount Mackey, overlooking Fort William. Looking west, between Pie Island and Thunder Cape, Isle Royale, a popular summer resort, may be seen in the distance. Fort William was formerly a very important Hudson Bay Company's post, and was the great rendezvous of the hunters, voyageurs and chief factors of the Company. The fur house of the old fort is now used as an engine house. The harbor is noted for its great coal docks and large grain elevators. These elevators have a combined capacity of nearly 30,000,000 bushels of grain.

CHAPTER XXXI

CITIES OF THE CANADIAN PLAINS

WINNIPEG—MEDICINE HAT—CALGARY.

ON THE EDGE of the great Canadian prairies, at the outlet of the great granary from which a considerable portion of the world draws its bread, lies the city of Winnipeg, capital of Manitoba and chief city of Western Canada.

Situated at the junction of the Assiniboine and Red Rivers in the midst of a wide plain, the richness of the soil early attracted the traders and gained the attention of Lord Selkirk who sent out several hundred Highland settlers. Three-quarters of a century before this Verandreye, the first white explorer to visit the Red River, erected Fort Rouge. On the same site the Nor'-Westers of Montreal afterward built Fort Gibraltar and this was followed by Fort Douglas and later on by Fort Garry. Near the latter (1835) a hamlet grew up and to this was given the name of *Winnipeg*, from the Cree dialect, meaning murky water.

From this humble beginning the metropolis of today has grown with almost magic swiftness. Its geographical position is unique for the purposes of trade. All the western trade in Canada, of the vast provinces of Manitoba, Saskatchewan, Alberta and British Columbia must pass through the narrow 100-mile belt between the international boundary and Lake Winnipeg. In

the center of this belt lies Winnipeg and through it flows the trade of three-quarters of a million square miles of prairie and woodland, which is steadily becoming more populous. All railways must pass through Winnipeg and in consequence it has become a considerable manufacturing and commercial center.

MEDICINE HAT

On account of the immense flow of natural gas and other advantages, Rudyard Kipling christened the place "The town that was born lucky." It is situated in the valley of the South Saskatchewan and is the center of a magnificent mixed farming district. Apples, plums and small fruit are quite at home here and a demonstration farm is operated by the Provincial Government. The city is a divisional point, with large railway shops all operated by natural gas. It is an important station of the Royal North-West Mounted Police. There is an abundance of coal all through the district, but the light, heat and power in the city are derived entirely from natural gas. Medicine Hat is growing rapidly and is becoming an industrial center.

Beyond the river the railway rises to the high prairie-plateau which extends, gradually rising, to the base of the mountains. At Redcliff, which is, like Medicine Hat, becoming an important industrial center, the railway crosses a fine stock-raising country, where some of the largest herds of Galloway cattle in the world are to be seen. There is a strong upgrade to Bowell, then a rapid descent to Suffield, followed by a steady rise. Bow River occasionally appears to the south. The prairie here is seen to advantage, and before August

it is a billowy ocean of grass. Cattle ranches are spread over it, and farms appear at intervals. The entire country is underlaid with two or more beds of good coal, and natural gas is frequently found in boring deep wells. This gas is utilized at Langevin in pumping water for the supply of the railway, and both there and at Tillery it can be seen burning brightly. From this station, on a very clear day, the higher peaks of the Rocky Mountains may be seen, 120 miles away. Just west of Carlstadt the line enters the three million acre Irrigation Block of the Canadian Pacific. The Block extends from this point to within a few miles of Calgary, a distance of 145 miles. This is the largest irrigation project on the continent and is divided into three sections. Work has been completed on the western section and a great part of the land marketed.

At Crowfoot the Rocky Mountains may again be seen. Near Crowfoot and south of the railway is a large reservation occupied by the Blackfoot Indians, and some of them are seen about the stations. At Namaka are located some of the most productive farms in Western Canada and very rich harvests are reaped annually. From Gleichen to Shepard the line traverses the western section of the Canadian Pacific Co.'s irrigation project and the canals and ditches are crossed at several points. From Gleichen to Shepard there is also a cut-off which traverses the irrigation belt. Irrigated farms are seen on each side of the track, and at Gleichen and Strathmore are located the Irrigation Experimental Farms where the results from the application of water in growing crops and trees may be noted. Beyond Gleichen—altitude 2,900 feet, population 500—

the Rockies come into full view—a magnificent line of snowy peaks extending far along the southern and western horizon. Near Strathmore are located a great number of the Canadian Pacific's "Ready Made" Farms. Under this policy the Company improves farms in advance of their sale, so that the arriving settler finds awaiting him a farm with a comfortable house, fine barn, a drilled well and about fifty acres in crop. The whole farm is fenced. The price of these improvements is added to the price of the land, the whole sum being payable in a space of twenty years. This policy has been extended to three Prairie Provinces, and is also being adapted to smaller areas in the Columbia Valley in British Columbia.

CALGARY

How a city may be created by a railroad is aptly shown in Calgary, the oldest city in the Province of Alberta. It lies on the Bow River, which flows with its crystal waters from the pass by which the main line of the Canadian Pacific Railway crosses the Rocky Mountains. The railway was built in 1883 and the town dates from that year.

The streets are wide and laid out on a retangular plan. The houses are largely of the brown Laramie sandstone from the valley of the Bow River nearby.

The city owns, operates and controls its public utilities, including municipal street railway, gravity waterworks system, light and power plant and street-paving plant. All these are profitable enterprises, and yield a large revenue.

CHAPTER XXXII

THE CANADIAN ROCKIES

BANFF AND THE CANADIAN NATIONAL PARK—HOLE IN THE WALL MOUNTAIN—LAKE LOUISE AND TEMPLE MOUNTAIN—LAKES ABOVE THE CLOUDS—THE GREAT DIVIDE—GOLD AND SILVER MINES—THE GREAT TUNNEL — TEN MILES OF ICE FIELDS — VANCOUVER — VICTORIA.

IT IS THE boast of the Canadians that the Rocky Mountains north of the international boundary line contain the most beautiful scenery of the North American continent, if not in the entire world. Many travelers who have made the trip from Calgary, Alberta, through Banff, Lake Louise, Field, and points along the Canadian Pacific Railway to the Pacific Coast, declare that even the glory of the Alps is dimmed by the grandeur of the Canadian Pacific Rockies. Switzerland's mountain scenery, say these travelers, is toy-like in comparison. Several Switzerlands could be placed in the Rocky Mountains of Canada and still not deprive that country of its chief points of interest.

From Calgary, which is the last point on the Canadian prairies, to the Gap, is a rise of about 1,000 feet. At the latter point the mountains rise abruptly in great masses. For scores of miles north and south, the Gap is the only entrance where Canadian Pacific Railway engineers could find an opening sufficient to make possible the construction of a railway line to the Pacific

coast of Canada. A bend in the railway line brings the train between two almost perpendicular walls of dizzy height. Through this gateway the Bow River issues from the hills. A short distance beyond, the traveler finds a long valley through the Fairholme Range and the Kananaskie Range opposite.

Prominent among the peaks in this vicinity are Pigeon, Wind and Three Sisters Mountains. A remarkable contrast between the ranges is very noticeable here.

SNOW-CAPPED PROMONTORIES

Probably the most impressive thing about the Canadian Rockies is their massive ruggedness. These mountains are tremendous uplifts of stratified rock of the Devonian and Carboniferous ages, which have broken out of the crust of the earth and slowly heaved aloft. On the right and left the traveler through this district will see massive snow-laden promontories rising thousands of feet, penetrated by enormous alcoves in which haze and shadow of gorgeous coloring lie engulfed.

Some sections, miles and miles in breadth, and thousands of feet thick, have pushed straight up, so that their strata remains as before. Still other sections are bent and crumpled under prodigious side pressure, while all have been broken down and worn away until now they are only colossal fragments of the original uplifts.

To him who is unfamiliar with mountain scenery, the sight is impressive, indeed, for snow-capped peaks single and comparatively isolated, rising to heights of 9,000 feet and more, appear on all sides. Among these

in the vicinity of Canmore, a region of large coal mines, are found the "Three Sisters." Nearby and along the embankment of one of the deep valleys traversed by the railway, are group after group of isolated and curiously weathered conglomerate mountains called "Hoodoos," giant earthen pillars ten times the height of a man—some of them—composed of hard enough material to withstand the erosions that have played havoc with the surrounding bank.

BANFF AND THE CANADIAN NATIONAL PARK

Five miles beyond Canmore the Rocky Mountain National Park of Canada is entered at Bankhead, with an altitude of 4,569 feet. The paths narrow suddenly and, as the mountains are penetrated, the scenery becomes grander and more awe-inspiring, the walled masonry shooting up in Seven Peaks; on the left is Rundle called after an early missionary to the Indians.

At Banff, an altitude of 4,521 feet, situated in the Canadian National Park, are located the Hot Springs. This park is a national reservation of 5,732 square miles, embracing parts of the Valley of the Bow, Spray and Cascade Rivers, Lake Minniwanka and several noble mountain ranges. Beyond are the Divide and the Yoho Valley. This national park is the largest in the world, being nearly one-half as large again as Yellowstone. No part of the Canadian Pacific Rockies exhibits a greater variety of sublime and pleasing scenery, and nowhere are good points of view and features of interest so accessible, since many excellent automobile roads and bridle paths have been recently constructed. Banff is in the midst of many impressive mountains; north-

ward is Cascade Mountain, 9,825 feet; eastward is Mount Inglismalde and the Heights of Fairholme of the Fairholme sub-range, beyond which lies Lake Minnewanka.

This country is filled with rich minerals, including all precious metals, sulphur and coal deposits. The Sulphur Springs at Banff are noted for their wonderful curative properties and each year are the gathering places for tourists from all parts of the world. Twenty miles south of Banff is Mount Assiniboine, the Matterhorn of the New World, the ascent of which, after several unsuccessful attempts, was made in the autumn of 1901 by Mr. James Outram and a party of Swiss guides. The way to them leads through beautiful valleys studded with transparent blue lakes and park-like prairie openings.

HOLE IN THE WALL MOUNTAIN

On leaving Banff, the traveler skirts the Vermillion Lakes to the right and the snow peaks far to the west enclosing Simpson Pass. The eastern crest of Pilot Mountain 9,600 feet in height, the landmark of mountain trappers, is easily seen and recognizable from both ends of the Bow Valley. "Hole in the Wall Mountain" is passed on the right, against whose side can be seen a cavernous opening to a mountain grotto. This cave is 1,500 feet above the valley bed, 12 feet from floor to roof, and runs back in the mountain for 150 feet, where a round chimney-like aperture gives glimpses of the open sky.

A little beyond is Castle Mountain on the right, a sheer precipice of 5,000 feet, a giant's keep stretching for 8 miles with turrets, bastions and battlements com-

Courtesy of the Canadian-Pacific Railway Co.

WHERE CRYSTAL WATERS MIRROR. The lofty crags with their gleaming snows are perpetually reflected in the quiet waters of Moraine Lake in the Valley of the Ten Peaks, Lake Louise, Alberta.

Courtesy of the Canadian-Pacific Railway Co.

In British Columbia. The majestic heights of Mount Stephen tower over the city of Field.

plete. A natural drawbridge, portcullis and gateway can be plainly distinguished against this acre wall. The back of this mountain is a gradual slope, glacier covered and overlooking a wild region of canyon torrent and bridges of rock.

From Banff to Castle and Lake Louise the ascent is gradual, and not until the last-named point is reached does the grade begin to fall toward the Pacific coast.

After passing Castle, altitude 4,657 feet, the mountains on either side become more prominent and acquire a majestic grandeur. Those to the northeast, from the bare rugged sharply surrated Sawback sub-range with a spur, called Slate Mountains, to those in the foreground at Lake Louise.

LAKE LOUISE AND TEMPLE MOUNTAIN

Passing along to Lake Louise the traveler sees Mount Copper squarely opposite the sombre precipice of the Castle. Westward of the Copper Mountain the top of Vermillion Pass opens through the range, permitting a view of many a lofty spire and icy crest along the continental waterhead, from whose glaciers and snow fields Vermillion River flows westward into the Kootenay. Most prominent among the peaks on the east side of the precipitous space are Storm Mountain, 10,309 feet, and the snow dome of Mount Ball, 10,825 feet.

West of the entrance into Vermillion Pass towering up tier after tier is a chaotic sea of mountains, and beyond, standing supreme over this part of the range, is the prodigious isolated helmet-shaped mountain named Temple, 11,626 feet—the loftiest and grandest in the whole panorama. This great snowbound mountain,

whose crest exhibits precipitous walls of ice flashing blue in the sunlight, becomes visible at Sawback Station and from Eldon almost to the summit, its white covered precipice is the most conspicuous and admirable feature of the wonderful valley. Lake Louise, altitude 5,032 feet, is in the heart of the Canadian Pacific Rockies.

Looking to the right northwest towards Bow Lake and the huge rounded snow-capped peak of Mount Daly a view is obtained of the glaciers. Farther north are other glacial fields, one of which is the source of three great continental rivers flowing to the three different oceans—the Athabasca or Mackenzie River flowing to the Arctic, the Saskatchewan to the Atlantic, and the Columbia to the Pacific. This is also the region of Mounts Columbia, Bryce, Athabasca and Forbes.

LAKES ABOVE THE CLOUDS

At Lake Louise, as at Banff, there are chalets for the accommodation of travelers. The Swiss guides are ready to lead tourists through any parts of the mountainous district surrounding. Lake Louise is the station for the Lakes in the Clouds, which are perched on the mountain sides amidst the most romantic environment. They are rare gems whose loveliness and charm surpass all description.

Lake Louise, Alberta, is 5,670 feet above the sea level. From the Chateau built on Lake Louise there is a bridle path to Mirror Lake, 6,665 feet up the mountain and a still further ascent to Lake Agnes to which a magnificent view of the Bow Valley and surrounding mountains is obtained. Both the lakes lie literally above

the clouds nestled in the rocky cirques among the peaks of the Beehive, Saint Piron Niblock, and White.

Innumerable bridle paths and excellent roads lead to beauty spots of surpassing charm in the district. This is the Mecca in the summer time for mountain climbers, hunters and people who enjoy out-of-door sports. Among the mountains in this vicinity are Mounts Victoria and Le Froy.

Mount Stephen is named in honor of the first President of the Canadian Pacific Railway—Lord Mount Stephen.

THE GREAT DIVIDE

Here is the "Great Divide" and the sparkling stream separates into two. The waters of one flowing to the Pacific and those of the other to Hudson Bay. From here the traveler descends rapidly, passing beautiful Wapta at Hector and crossing the deep gorge of the Kicking Horse River just beyond. The line clings to the mountain side at the left and the valley on the right rapidly deepens until the river is seen as a gleaming thread 500 or 600 feet below. Above is the serrated sky line whose craggy margin hides the glaciers and real summit of the range. Looking to the right Yoho, one of the grandest mountain valleys in the world, stretches away to the north with great white glacier-bound peaks on either side. Looking to the right the Heights of Mount Field are seen. This place is the objective point for a great many various kinds of sports-men, for there is excellent fly fishing for trout in the lakelets and streams near the village. Mountain goat, sheep and game of large variation abound.

Continuing from Field, the traveler passes Ottertail,

Leanchoil, Palliser, Glenoble, Golden and Moberly. The Selkirks now come in sight, rising from their forest-clad basis and lifting their ice-crowned heads far into the sky. They extend in an apparently unbroken line from southeast to the northwest gradually melting into the remote distance. Parallel with them and rising eastward to the right and north from the Columbia range are the Rockies, only the loftiest of peaks are to be seen over the massive benches on which they rest.

GOLD AND SILVER MINES

Golden is the mining town on the banks of the Columbia at the mouth of the Kicking Horse. During the summer steamers make trips up the Columbia to Windermere on the lakes at the head of the river, 100 miles distant. Above Golden in various places gold and silver mines are being developed. Among the prominent peaks of the Selkirk range probably the most widely known is Sir Donald. There is an excellent motor road from Golden down the Windermere Valley. This road is part of 500 miles of boulevard, recently completed, which connects this marvelous valley with Banff and Calgary.

Again on the main line the traveler ascends from Moberly through Donald, Beaver Mouth, Six Mile Creek, Cedar and Bear Creek to Rogers' Pass, which has an altitude of 4,302 feet. This Pass was named after Major A. B. Rogers by whose tremendous energy it was discovered in 1881, previous to which no human foot had penetrated to the summit of this great central range. The Pass lies between two lines of huge snow-bound peaks. That on the north forms a prodigious

amphitheatre under whose parapet 6,000 feet above the valley, a half dozen glaciers may be seen at once and so near that their shining fissures are distinctly visible. In this direction, at the head of the largest glacier may be seen a group of sharp surrated peaks clear against the sky. The tallest is Swiss Peak, so called in honor of the members of the Swiss Alpine Club, who first stood upon its highest pinnacle. The changing effects of light and shadow on this brotherhood of peaks, of which Tupper and McDonald are among the chief, can never be forgotten by the fortunate traveler who has seen the sunset or sunrise tinting their battlements, or who has looked up from the green valley of the Snow-storm, trailing its curtain along their crests with, perchance, a white peak or two standing serene above the harmless clouds.

THE GREAT TUNNEL

Connaught Five Mile Tunnel, just completed by the Canadian Pacific under Mount Sir Donald of the Selkirk range, is the longest railway tunnel on the American continent, the next longest being the 4¾ mile Hoosac Tunnel on the Boston & Maine. The $10,000,000 Connaught Tunnel shortens the route 4 miles and materially reduces the grade. It eliminates 4½ miles of snowsheds and makes unnecessary much snow-fighting equipment and labor heretofore kept ready at great expense at Rogers' Pass.

The engineers spent two years seeking a location for a tunnel through the Selkirks, finally deciding upon Rogers' Pass, which crosses the range in the midst of a vast amphitheatre formed by rugged, snow-capped moun-

tains. Of the many peaks which form a seemingly impossible barrier between the prairie country in the east and the Pacific coast, Mount Sir Donald forms the culminating pinnacle, its altitude being 10,808 feet. Mount MacDonald, which is 9,860 feet in height, also looms out prominently with rugged and precipitous slopes.

The Beaver Valley lies east of the Selkirk range and the Illecilliwaet Valley to the west. On the trip westward, through the pass, trains start the ascent of the Selkirks at Beavermouth, 28 miles west of Golden, at an altitude of 2,435 feet, and the most northerly station on the route.

Before reaching Beavermouth the road crosses the Columbia River at the base of the Selkirks, which, in contrast to the Rockies, are covered with forest. The line enters the Selkirks through the gate of the Beaver River, a picturesque spot where a natural bridge spans a torrent, which at that point makes its final plunge down to the level of the Columbia.

Six Mile Creek, five miles west of Beavermouth, is the junction point for the new location, which leaves the old route, notched into the mountain side and rising at an average rate of 116 feet in the mile, and descends into the Beaver Valley, following the river to the eastern portal of the tunnel under Mount MacDonald. The scene of the tunnel operations is more than 1,000 feet below the previous track level of the Canadian Pacific. The route parallels the course of Bear Creek after leaving the station of that name, following a continuous upward grade through five miles of sheds, erected to insure the safety of trains from the snow slides.

The western portal is located about 1,700 feet below and a short distance west of Glacier House. The main passage will provide for double tracks, and the approaches from both ends will also have parallel lines.

The tunnel, which is 29 feet wide and 23 feet high, follows a straight line under Mount MacDonald, emerging in the Beaver Valley at a point about 1,000 feet below the old line. The eastern entrance is directly below Hermit, a station just east of Rogers' Pass. The highest point reached in the tunnel is 3,795 feet above sea level and 4,065 feet below the summit of MacDonald Peak. The passage through the mountains has now a grade of one per cent up to the interior summit.

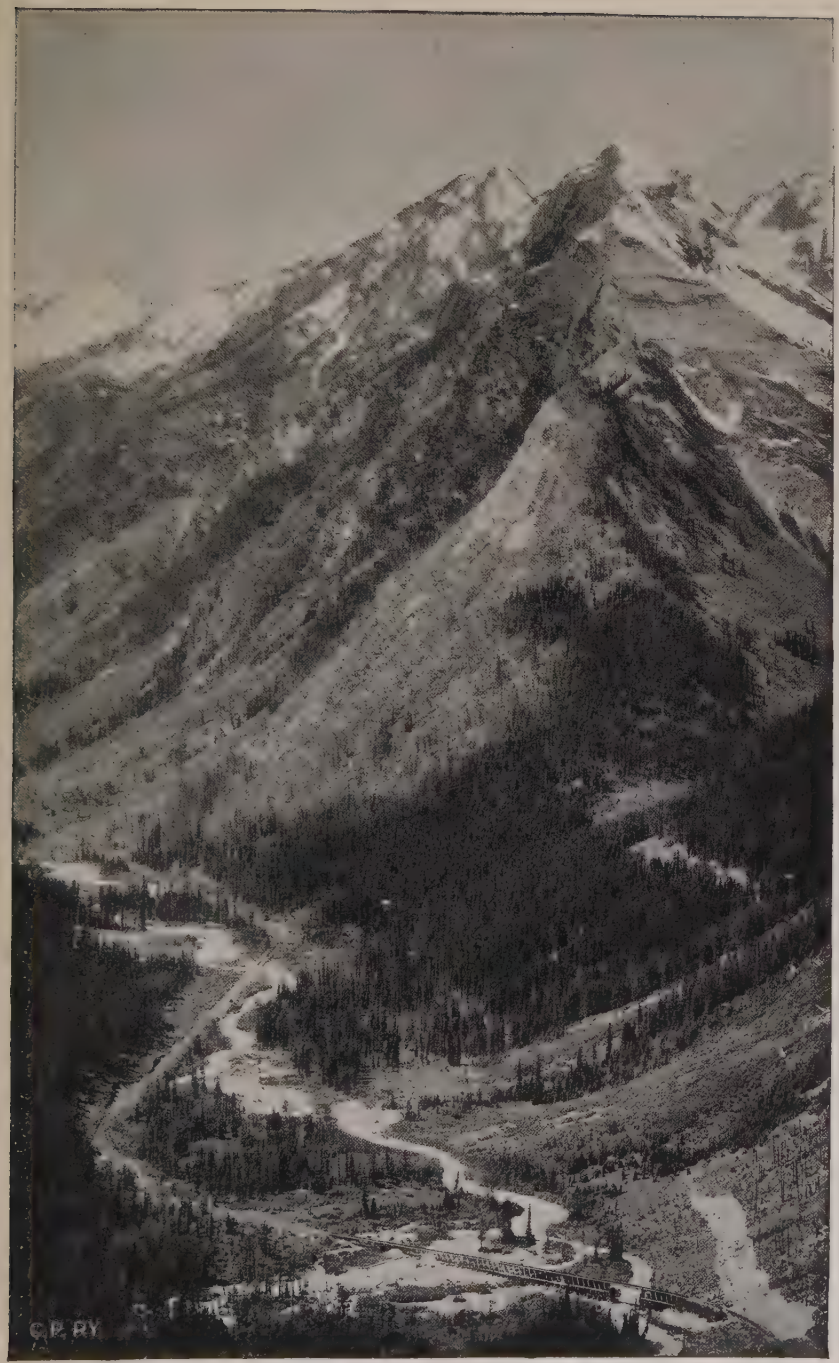
On the south stretches a line of peaks connecting MacDonald with Sir Donald, Uto, Eagle and Avalanche from south to north. This Pass Valley has been reserved by the Dominion government of Canada as a National Park. Selkirk summit, 4,351 feet, is the summit of the pass. It is surrounded by Tupper, the group of castelled granite crags directly above the pass; Hermit, a rounded height; the Swiss Peaks, distinct from the peaks on each side by a deeply notched ravine; Rogers' Peak sloping down on a gradual sky line, to Sifton, which is separated by a deep ravine from Grizzly, which in turn stands opposite to the pyramidal heights of Cheops, a veritable Titan of this group, with the profile of a hatted Napoleon plainly silhouetted against the face of Cheops overlooking the vast glacial field of the whole Hermit range. On the crags of the Swiss Peaks, a second cowled figure, with his inseparable dog, can be seen as if a companion of his brother on Mount Tupper.

Looking out of the pass toward the west and over the valley of the Illecillewaet is Ross Peak, a massive cleft summit carrying an immense glacier on its eastern slope. At the right of Mount Sir Donald is the valley of Illecillewaet River, which makes its way westward by a devious course among numberless hoary-haired mountain monarchs, winding into leaps, cascades and falls betwixt forests of tropical luxuriance and clefts worn through ancient moraines.

TEN MILES OF ICE FIELDS

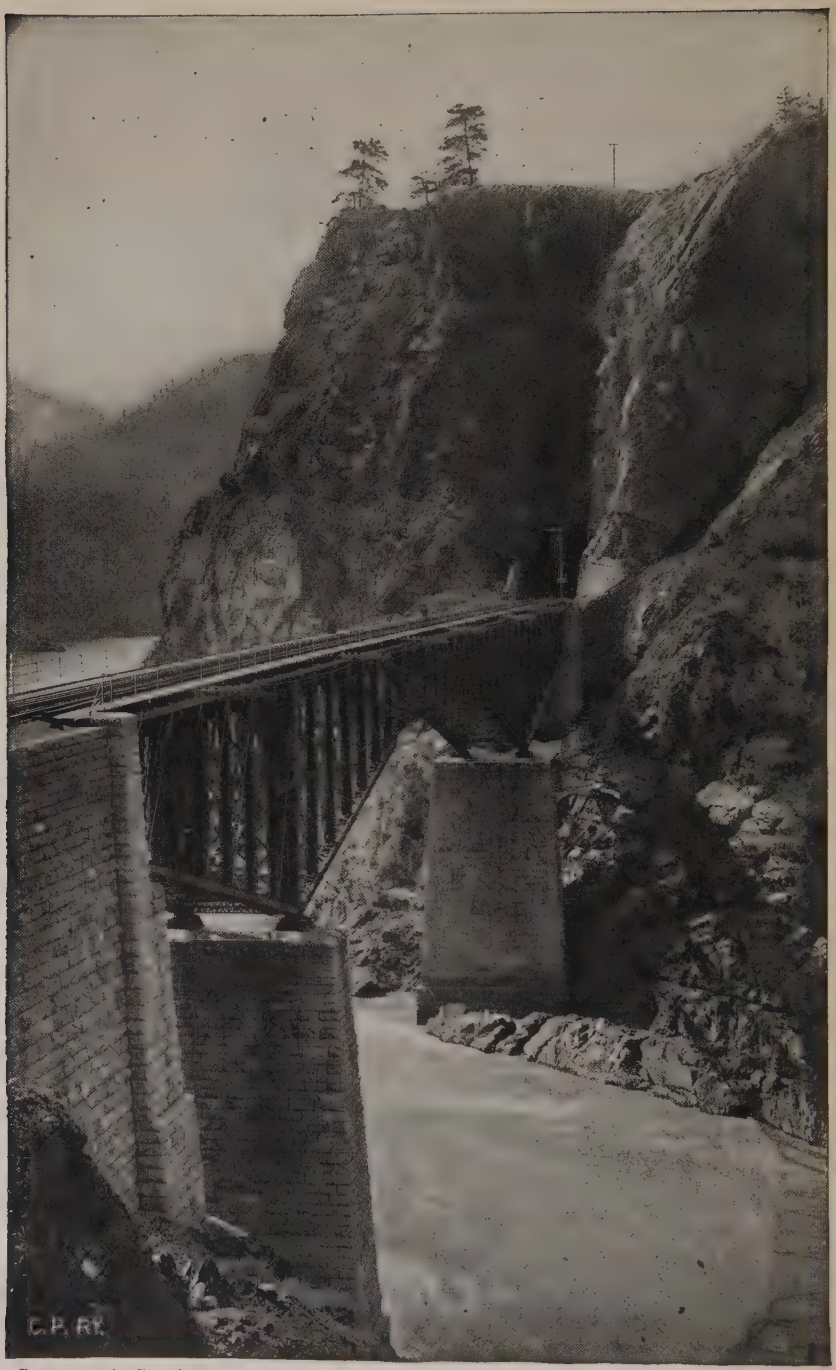
Passing along snowsheds a sharp curve brings the train in front of the Illecillewaet Glacier, which is very near at the left—a vast cascade of gleaming ice falling 4,500 feet from the summit of the snowfield in which it has its source—one glacier of a group of glaciers all together. The ice field, of which the Illecillewaet is one of a number of outlets, embraces an area of about ten square miles. From Glacier House, which is 423 miles from Vancouver, the Pacific coast terminus of the Canadian Pacific Railway and the largest city in British Columbia, the traveler descends rapidly down through Revelstoke, Clanwilliam, and Three Valley to Craigellachie, where the last spike—a golden one—was driven in the Canadian Pacific Railway on November 7, 1885. The rails from the east and the west meeting here. Lord Strathcona drove the spike.

The traveler follows for a greater part of the way the canyon of Fraser River, through a section far famed for its surpassing scenery and individuality. Fraser River is noted for its wonderful salmon and one can see the Siwash Indians from the nearby reservations spearing



Courtesy of the Canadian-Pacific Railway Co.

ILLECILLEWAET VALLEY. Winding along at the foot of this splendid mountain range may be seen the tracks of the Canadian-Pacific Railway.



Courtesy of the Canadian-Pacific Railway Co.

ON THE FRASER RIVER. Cisco Bridge and Tunnel over the lovely Fraser River, near Lytton, British Columbia.

fish and hanging them out on improvised hangers to dry in the sun. This dried fish forms the major portion of the Indian's food during the winter. Game abounds in this country.

VANCOUVER

The Pacific terminus of the railway, and the location of one of its palatial hotels—the Vancouver. The nearest ocean port to the great wheat lands. Until May, 1886, its site was covered with a dense forest. From May to July its growth was most rapid, but in July a fire, spreading from the surrounding forest, swept away every house but one in the place, and, with this one exception, every building now seen has been erected since that time. The situation is nearly perfect as regards picturesqueness, natural drainage, harbor facilities and commercial advantages. It has extensive wharves and warehouses, many hotels, churches, schools, etc., all of the most modern character. Many of the city's buildings are of brick and granite, and its private residences would do credit to cities of a century's growth. It has many miles of asphalt streets and cement sidewalks, is lighted both by gas and electricity, and it has an electric street railway. The city's sewage system is second to none, while an ample supply of pure water is provided by means of pipes laid under the inlet from a mountain stream opposite. There is a regular steamship service to Victoria, Nanaimo, and San Francisco, to China and Japan, to Sydney, Australia, via Honolulu, H. I., Suva, Fiji, and Puget Sound, and Alaskan ports, it being one of the principal points of departure on the coast for the Yukon, Cape Nome and other northern

gold fields, and an outfitting headquarters for miners and prospectors.

The country south, towards the Fraser, has fine farms, and is adapted to fruit growing. The railway running from Vancouver to Stevenson intersects this district and gives access to the salmon canneries at the mouth of the Fraser River. The coal supply comes from Nanaimo, directly across the straits of Georgia, and almost within sight. The scenery all about is magnificent —the Cascade Mountains near at hand at the north; the mountains of Vancouver Island across the water at the west; the Olympics at the southwest; and Mount Baker looming up at the southeast. Stanley Park is a magnificent public pleasure resort. Opportunities for sport are unlimited at no great distance—mountain goats, bear and deer in the hills along the Inlet; trout fishing in endless variety; and Capilano Canyon, a few miles across the Narrows, affords a pleasant outing. A stay of a week at Vancouver will be well rewarded. A steamship connects with Victoria three times daily, a ferriage of about four hours through a beautiful archipelago.

VICTORIA

Is the capital of British Columbia, charmingly situated at the southern extremity of Vancouver Island, overlooking the Straits of Fuca to the Pacific, and beyond the Gulf of Georgia, the mainland. Across the strait are the beautiful Olympic Mountains, and far away to the east the white cone of Mount Baker is conspicuous. The climate is similar to that of the south of England. Besides the magnificent government buildings, which

rank amongst the most handsome in America, the city has many fine public and private structures. Beacon Hill Park affords a fine view of the waters and the mountains on every side. The city has an extensive trade, and many large commercial houses, which do a very large outfitting trade for the Yukon. The Chinese quarter is always interesting to visitors. The Esquimault & Nanaimo Railway extends north-easterly 78 miles to the great coal mines at Nanaimo, and on to Port Alberni, the nearest Canadian port to the Orient with trans-continental connection, passing through a fruit-growing and farming as well as very pretty country in which are several pleasant summer resorts near which good shooting and fishing are obtainable. A large number of English folks have settled in the neighborhood of Duncan's, where the delightful climate and fertile soil are such as to combine pleasure with profit. Many people who have achieved independence have taken up residence at other points along during the past few years. A very delightful Chalet Hotel is situated at Cameron Lake. Steamboats afford connections with Vancouver and British Columbia mainland, and with Puget Sound ports, and steamships depart about every five days for San Francisco, connecting there for Southern California, Mexico and South American west-coast ports. Steamers from and to Vancouver for Japan, the Hawaiian and Fijian Islands, and Australia, stop at Victoria, many tourists taking the steamer at this port, and there are regular sailings for Alaskan points both for tourists visiting the wonderful fiords of the north coast, and those intending to explore the great gold belt of the Yukon. Esquimalt Harbor, two miles from Victoria, was formerly the

British naval station and rendezvous on the North Pacific, with naval storehouses, workshops, graving docks, etc. This old association has attracted many ex-naval officers to retire for their declining years to Victoria. While they were stationed at Esquimalt they were captivated by the magic of that perfect climate and by the fragrance of the lovely gardens which make Victoria the Rose of the Pacific.

* There are 96 pages of illustrations in this book, which, added to the 272 pages of text, make a total of 368 pages.